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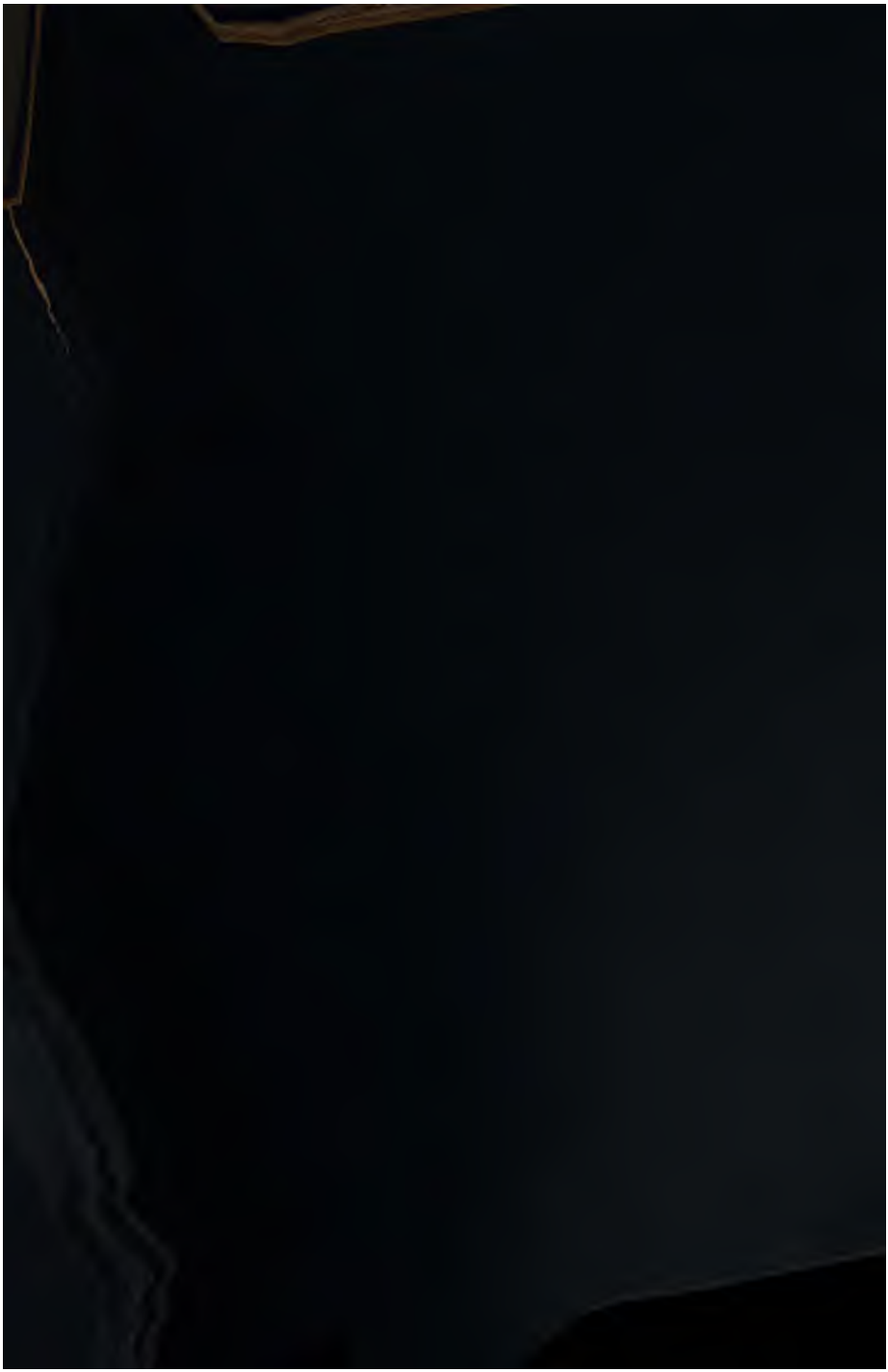

THE BATHS OF CHILLAN.

[*To face p.* 141.

CHILI:

SKETCHES OF CHILI AND THE CHILIANS DURING THE WAR

1879–1880.

BY

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AUTHOR OF "COAL MINES' INSPECTION," ETC.

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PREFACE.

THE following pages were not originally intended for publication, and consist only of the notes made by a traveller desirous of gleaning some knowledge during a journey through the country. At the instigation of friends who considered that some account, however imperfect, of Chili under present circumstances might be of general interest, these jottings have been placed before the public in their present form. They may serve to while away an idle hour, and to give some information about a country little known in England.

R. N. B.

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CHILI.

CHAPTER I.

At Sea—Pauillac—Lisbon—Rio de Janeiro—Monte Video—Sandy Point—Straits of Magellan—Valparaiso.

It would be superfluous here to describe the pleasures or discomforts of the long ocean journey which must either be enjoyed or suffered by travellers bound for the west coast of South America. It will be sufficient to state that I left Liverpool on board the Pacific Navigation Company's steamer *Galicia*, bound for Valparaiso, touching at Pauillac for Bordeaux, Lisbon, Rio de Janeiro, Monte Video, and Sandy Point; that our voyage was accomplished without mishap, and with possibly rather less than the usual discomforts of so long a journey. At Pauillac a number of passengers and a good deal of cargo was shipped—the former being mostly South Americans on their way home from the Continent of Europe, and the latter consisting of light goods, wine, and a great number of pianos, a circum-

stance which at that time surprised me, not knowing the musical taste of the new countries.

In leaving Lisbon we bade farewell to Europe, and settled down to the usual, and generally monotonous, life of a sea-going ship, with the prospect of sighting the coast of South America at, or near, the harbour of Rio de Janeiro. The approach to land is generally welcome to people who have been confined to the narrow limits even of a fine ocean steamer, and have had no other view for days than that of the big heavy waves of the Atlantic. We therefore hailed with satisfaction the heights surrounding the beautiful bay of Rio. The descriptions of this harbour by travellers all concur in rightly lauding its beauties. It combines the picturesque ruggedness of the Norwegian fiord, with the brilliant tints and rich vegetation of the tropics. To add to the interest of the scene, as we entered the harbour, crowded with vessels from all parts of the world, the bunting was hoisted and five minute guns were fired from the forts in memory of the late Emperor of the Brazils, father of his present Majesty, who died on that day, the 24th of September. Fortunately for the passengers of our good ship, yellow fever, the plague of the city, was not virulent at the time, and we were all able to land.

Rio lies scattered among a series of small valleys, formed by several isolated mounds, round which the streets run in tortuous irregularity. The older part of

the town is badly built, with narrow, ill-paved and dirty streets; the newer is rectangular, and the monotonous regularity prescribed by modern sanitarianism is observed. The principal street, the Rua Ovidor, with its shops, cafés, and lounges, is particularly narrow and dirty. In spite of the narrowness and tortuousness of the streets, tram-cars are running in nearly all the thoroughfares. The town being shamefully paved, a tram-car is a boon, almost a necessity, in order to move from place to place. Walking is too fatiguing in a hot climate, and the jolting of a cab or carriage must be positively painful. The trams are used by all inhabitants, from the wealthy baron to the swarthy slave, and patronized by distinguished foreigners in the absence of any other mode of conveyance. In using them it is well to recollect that the town is never entirely free from yellow fever, and that whereas patients *may* be taken to hospital in a cab they cannot be conveyed in a tram-car. In the narrow streets the car fills up the entire space, and the pedestrians have to fly into doorways, or rush away round the nearest corner, when the well-known whistle announces the near approach of the ponderous vehicle.

Almost the first sight the stranger desires to see in Rio is the Botanic Garden, with its magnificent alleys of palm-trees: and this is reached by a line of tram-cars from the corner of the Rua Gonsalves Dias, which, after skirting the pretty little bay of Botafogo, with its

cheerful esplanade and circle of houses, runs along a good straight road lined with neat villas for a couple of miles. The palm-trees are planted in avenues about half a mile long, their branches forming a sort of vaulted roof, about forty feet above the pathway. Beside the palms, there is little to notice beyond the luxuriant tropical vegetation, which can, however, be seen in private gardens of any size; the place is not particularly well laid out or neatly kept. But then nothing is very neat in Rio; the town is dirty and unwholesome. Few strangers reside in it, but seek the more salubrious heights in the vicinity. The hill of Tejuca is a favourite resort for foreigners, especially the English, and on the summit there is a semi-English hotel, in which people sometimes reside from year's end to year's end, and here, among others, we determined to pass the night. A tramway runs part way up the hill, and the last and steepest stages are performed in a four-horse coach, or rather American omnibus. The road runs through gardens, luxuriant in tropical vegetation, and from different points most charming views of the town and bay of Rio are obtained. Gradually the temperature changes, and at the hotel it is agreeably cool. The thermometer only registered 52° when we reached the summit, which was almost cold in comparison with the heat of the town.

The drive down to the harbour in the early morning was particularly enjoyable. We passed through the

market on our way to the port, and found it reeking with the stench of rotting fruit and unsavoury meat, and noisy with screeching parrots and chattering monkeys. We were glad to regain the ship, now ready to steam on to the River Plate.

The temperature became sensibly cooler and the evenings very pleasant as we sailed southwards. We reached the mouth of the huge river by daylight, and it was difficult to realize that we were in a river, even after we had steamed up many miles. The width of the Plate at its mouth is eighty miles, and at Monte Video about forty miles. We anchored off Monte Video at ten at night, and could only realize the presence of a large town by a string of lights, seen at a considerable distance. We found on landing next morning that the steamer lay about two miles from the shore, as the water is shoal. Monte Video is a clean and regularly built town, standing on a sort of promontory in the River Plate. It had a painfully dull appearance, which we were told was owing to complete stagnation of trade. Many warehouses and shops seemed closed, and some of the houses uninhabited. In the afternoon we had a long ride on a tramway along a road forming the fashionable suburb of the town, and there passed numerous country houses, each surrounded by a garden and decorated with plaster statuary of rather more than less bad taste. Many of these houses were empty, owing to want of means of the owners, and nearly all were in a wretched state of neglect.

The wave of bad trade which has lately swept over the globe seems to have spared no country and no kind of business. The River Plate people have now some hope of lucrative occupation in growing and exporting grain, which is a new trade for them, as hitherto they have confined themselves to rearing cattle, which are valuable for their horns, hides and tallow.

The population of Uruguay is a very mixed one. There exists a considerable number of free blacks, mostly immigrants from the Brazils, a residue of aboriginal Indians, a good many Europeans, and of course a great intermixture of blood. We had an opportunity of seeing the great variety of race composing the population, as we witnessed a strange procession, including several regiments.

It appears that in one of the numerous fights during the war or wars of independence one, or, perhaps, two Argentine generals fell on Uruguayan territory, and were buried where they died. Quite lately the Argentine Republic reclaimed the bones of these heroes, and accordingly a search was made on the spot where the remains were supposed to lie, and where some bones were found. It occurred to the authorities that these might as well be placed in something smaller than a coffin, and so they were deposited in a large urn, which was carried behind an empty hearse forming the head of the procession. Then followed three regiments, each of which was headed by a company

of sappers and a brass band. The sappers made a strange impression on us, for they were all Indians, with wild features, long straight noses, copper-coloured skins, and shiny black hair. They were grotesquely accoutred with leopard skins and quaint busbies. The rank and file were tolerably uniformed, but their heterogeneous appearance spoiled the effect from a military point of view. The staff officers presented a gorgeous appearance. They did not seem to adhere to any particular uniform, but allowed their taste or fancy to dictate the cut of their clothes. These officers were mounted on fiery prancing little steeds, heavily caparisoned with silver. The bits and stirrups were of solid metal, and the reins richly ornamented. Behind the soldiers came a plain carriage, in which the President sat with his Prime Minister. The former kept well back in his seat, and avoided the popular gaze. It appears he is in great fear of being shot. The Minister did all the bowing, and tried to attract attention by taking his hat off occasionally, but the crowd did not respond, and looked on this part of the procession with the utmost indifference. A long string of shabby carriages and dirty cabs closed the show. The remains were handed over to the Argentine authorities on board a man-of-war sent over from Buenos Ayres to receive them, and a great deal of gunpowder was wasted during the afternoon in firing guns every five minutes.

Monte Video is an expensive place. The duties are

high on all goods, and labour seems scarce and dear. The President of the Republic wields an autocratic power, and practically his will is law. A week before my visit he issued a decree reducing the import duties on certain goods thirty per cent., without any notice, so that many merchants suddenly found their stocks reduced one-third in value. He rules with a hand of iron, but it appears that the lawless state of the country requires a government of this description. The port of Monte Video had an appearance of more activity than might have been expected, and a good many steamers and sailing ships were anchored off the town.

We left the harbour early in the morning to continue our journey southwards. When we got out of the river we found a fair wind and a calm sea, the temperature becoming sensibly cooler as we approached the Straits of Magellan. The coast of Patagonia is very uninteresting, consisting of low dark-coloured mounds covered with sparse brownish grass. The land diminishes in height towards the south, and at Virgin's Point, the southernmost extremity of Patagonia, is nothing but a low sandy beach running out to sea. Soon after passing the Virgin's, Sandy Point is reached. This consists of a few houses and huts, forming the Chilian colony on this desolate and uninteresting coast. The Chilian Government has a convict establishment near the coast, and attaches special value to the place, as it is the only

settlement in the Straits, to which important water-way they lay claim. The importance of this can be well understood, considering the position which Chili occupies at the extreme south of the west coast of America, the important trade she has with Europe in grain and minerals, and that this is the shortest and safest road for the numerous vessels which carry on her commerce with the world.

When Sarmiento sailed about the Straits in 1558, now 300 years ago, he landed on the east coast of what is now known as Norfolk Island, not far from Sandy Point, and found a sheltered bay, which he called "La Bahia de la Gente." Here he had a vision, and imagined he saw the coast covered with fine buildings, high towers, steeples, and a numerous population, and wondered how these results of civilization came to exist in the midst of the wilderness. His vision may have been doubtful, and is only recorded by his biographers; but it is strange that, in centuries later, this very point should have been chosen for a settlement, which, although it does not present the grandeur of the imagined town, is yet the beginning of what may, some day, become a large city.

Although the Straits have been surveyed and reconnoitred by many great mariners since Magellan's time, and specially by Englishmen, from Drake to Fitzroy, they were not much used as a water-way until the introduction of steam navigation. The first steamship

which passed through the Straits was H.M. sloop *Virago*, under Captain Houston Stewart, in 1851, and since then it has become the usual route for all steamers passing from the Atlantic to the Pacific Ocean. In the vicinity of Sandy Point outcrops of coal-seams have been discovered, and, not far in the interior, quartz reefs containing gold are known to exist. The coal is a good lignite, and useful for many purposes. Traces of coal have been also found in various parts of Terra del Fuego; and it is within the range of possibility that this desert wilderness may, at some future period, be the centre of an active mining industry. At present Terra del Fuego seems a misnomer, for it is a land of ice and snow. About six hours' steaming from Sandy Point brought us to the Narrows, the most interesting part of the Straits. Here the coast, on either side, assumed a rugged and wild character, the steep snowy peaks of the mountains running up several thousand feet. At the time of our passage the slopes were covered with snow down to the water's edge. Here and there, among the higher mountains, we could discern a glacier, and the whole range looked cold and forbidding. The day was bleak and wintry, and a sharp east wind was cutting through the Narrows, although in October, the early spring of those latitudes. While crossing one of the fiord-like expanses of the channel we perceived a small and apparently frail canoe, manned by several Fuegians, strug-

gling to get near us. The steamer was stopped to enable them to come alongside, but the wind and waves were too much for them and their barque, and we had to content ourselves with a distant view of the wild inhabitants of these frozen latitudes. They appeared small in stature, very weird-looking, and clothed in one garment, made of the guanaco skin. The Terra del Fuegians differ greatly from the Patagonians, who are remarkable for their stature, and while the former live on fish and inhabit the coast, the latter hunt the guanaco and ostrich, and never come near the sea-shore except for trading purposes. The Fuegians form a race almost singular and apart from the other wild tribes of South America, having no resemblance to any of them. A facetious fellow-passenger suggested that they might originally have come from the west coast of Ireland, which used to be inhabited by a very wild race. But it would be difficult to trace the affinity between the home rulers of Desolation Island, and those of the distant western isle.

We met the Fuegians not far from Smythe's Channel, a sort of natural canal running north and south along the coast, and reputed to be very wonderful to see, but very dangerous to navigate. We sailed on, and passing Cape Pillar at dusk, got out into the Pacific Ocean.

Cape Horn is world-famed for the uncertainty of the weather—as a rule it blows very hard; our experience

of the South Pacific forms no exception to that rule, for we encountered a strong breeze, amounting at times to a gale, after clearing Cape Pillar. We were now steaming northwards along the coast of Chili, though we did not sight land until we were close to Coronel, where we anchored for some hours to coal. The Chili coal is very suitable for steam purposes, and the Pacific Company's ships take in a supply here, to serve them up the coast, and, on the return voyage, sufficient to reach Rio de Janeiro. While the bunkers were being filled, several passengers, myself among the number, took the opportunity of visiting the park of the Cousiño family at Lota, a small port a few miles distant. On landing we found ourselves on a coal heap, surrounded by miserable hovels, in which workmen seemed to live. The liveliest imagination had not raised the possibility of a first-landing in Chili on a coal-pit bank. We were more surprised than edified, and hurried off in a boat to the flowers and trees of the Park of Lota, which is close to the collieries and copper works belonging to the same family, but so placed as to be sheltered from smoke and dust. The park covers several hundred acres, and is laid out after the French style. Nature is diversified, but scarcely improved, with artificial grottoes, cascades, kiosks, and plenty of statuary and crockery ornaments. The work has evidently been executed regardless of expense, but a little less bad taste would have been advanta-

geous. However, the promenade was thoroughly enjoyed by a party of not over-critical travellers, fresh from a rather stormy ocean.

We were now very near our destination, and, leaving in the evening, we sighted the bold outline of the mountains near Valparaiso in early morning, and cast anchor in the harbour at about ten o'clock on the 10th of October.

I felt disappointed with Valparaiso. The harbour lies in a sort of recess of the coast range, and the hills are all of a dark brown colour, rising steeply from the water's edge, and cut up, here and there, by ravines or gullets, in which a stunted and dark green vegetation grows. The high ground round the harbour forms a kind of amphitheatre, over which the low and tile-covered houses are irregularly pitch-forked, and, at first sight, it is difficult to realize the existence of a town, from the harbour. On landing, however, I discovered that along the foot of the hills some level space existed, on which several parallel streets had been constructed. These streets are very lively, and thronged at times with a busy crowd of merchants and seafaring men. The shops are well supplied with European goods, and the town has every appearance of prosperity. Owing to the nature of the ground, there are few squares or open spaces, and those are not attractive. The promenade of the town is the new quay, constructed on reclaimed

ground, and lined with warehouses. The name of the town would certainly imply a different locality, but it was so-called, not from the nature of the ground, but after the birthplace of Don Juan di Saavedra, in Spain, who founded the place in 1536. The town now has risen to great importance, and contains over 100,000 inhabitants, many of whom are foreigners. It is the principal port of the Republic, and may be considered as the commercial capital and leading place of business.

The tramways here, as elsewhere in South America, are much used, and run through the principal streets. Owing to the present dearth of small coin in the country, the tramway company issues tokens made of india-rubber, and about the size of a shilling, value five and ten cents, and these pass current in the town.

There is not much to be seen in Valparaiso. The community is absorbed in trade, and amusements are scarce. The theatre was burnt some years ago, and has not been rebuilt. A small music-hall is now used as a theatre, where only occasional performances are given. The most interesting sight at the time of my visit was that of the forts, destined to defend the town and harbour, with its floating docks, against any attack of the Peruvians. The guns are heavy and of the best English and American manufacture, most of them being Armstrongs. While at Valparaiso I witnessed the arrival of the ironclad *Blanco Eucalada*, with the prisoners taken in the Peruvian man-of-war *Huascar*,

which had been captured by the Chilian fleet on the 8th of September. A large crowd assembled on the quay to witness the landing of these unfortunates, but they were silent and undemonstrative. The men were quietly landed and sent off by railway to Santiago, where they were incarcerated. I saw little in the town to remind one of the war then raging between Chili and Peru. There was a total absence of uniforms in the streets, and no military swaggering whatever.

On Sunday the militia of the town assembled for drill in the streets, according to the ancient custom of the country, in time of peace or war. These men, though not perfect in their drill, had the appearance of good fighting material, and they have proved both valorous and enduring in the recent campaigns in Atacama. A long sojourn in Valparaiso, at the time of my visit, was not desirable, owing to the prevalence of small-pox, which appears to afflict the town with much violence from time to time. Our object being to visit the South of Chili, my companion, a member of the Institution of Civil Engineers, and I took passage in one of the Pacific Company's boats for Lebu, a small town in the south, recently founded, and noted for extensive coal mines in the neighbourhood, and a rapidly increasing trade in grain.

CHAPTER II.

Journey to the South—Coast Line—Tomé—Talcuhano—Conception—Earthquakes—Coronel—Lebu—A New Town—Whalers—Collieries—Indians—Trade—Agriculture.

THE journey from Valparaiso to the south of Chili is usually accomplished by the steamers of the Pacific Company, which run between that port and Puerto-Montt, situate in the extreme south. The trade along the coast is very considerable, and in addition to the passenger steamers sailing fortnightly, there is a large fleet of coasters and steam colliers constantly employed.

The coast line is not in general attractive; it is rock-bound and forbidding. The cliffs rise almost perpendicularly from the sea, up to an average altitude of some 800 to 1,000 feet, and in general are absolutely bare. Sometimes a cluster of stunted trees may be seen vegetating within the protecting heights of an elevated peak, but rarely so.

Here and there the sand from the shore covers the less precipitous slopes up to their summit, where it has been drifted by the gales which blow with great violence during the winter months. The land looks

barren and unproductive, yet the valleys inland are fertile. The mountains which form the southern shore of Chili are part of the coast range, or "Cordillera de la Costa," a chain of mountains running parallel with, though not so high as, the great "Cordillera de los Andes." Between these two ranges of mountains lie the great central and many minor valleys, protected from the tempests of the Pacific, and fertilized by the perennial streams of water which flow down the slopes of the snow-capped Cordillera. Several rivers break through the rocky wall of the coast and flow into the ocean, such as the Mapu, the Rapel, and the Mataquita; but these rivers are not navigable. The Maule is navigable for small craft, but the only river of importance is the Biobio. This stream rises in an extinct volcano in the Andes, and, after a course of nearly 220 miles, flows into the Pacific Ocean, bringing with it an immense mass of volcanic sand, which forms a bar at its mouth and prevents vessels of any considerable draught from ascending.

A few miles south of the mouth of the River Biobio is the Bay of Talcuhano, formed by a recess in the mountain chain, and protected from the ocean by a large island, so that in reality the bay resembles an inland lake. It is so well protected by nature, and might be so easily guarded by fortifications, that the Chilian Government have seriously considered a project for establishing here a naval arsenal and ship-building yard. The land

round Talcuhano Bay is considerably lower than along the coast, and slopes gently down to the water's edge. Being protected from the south winds, it is arable, and is mostly cultivated.

At the northern extremity of the bay, which is about ten miles long, there lies a neat little village called Tomé, celebrated for its vineyards. The country around Tomé is one of the largest wine-producing districts in Chili. The vines were originally imported from Spain, and the wine made from them is similar to the common wines of the old country, being dark-coloured, somewhat sweet, and rather strong. A considerable number of casks were sent on board for the south, and to save time and trouble, as the ship lay some distance from shore, they were floated in the water and fastened to a line, the end of which was towed by a couple of men in a boat to the ship's side, where the casks were hauled on board. The amount of wine produced in the Province of Conception, in which Tomé is situated, amounts to about 400,000 gallons per annum, so that this trade is by no means inconsiderable. Tomé also boasts of a cloth factory, and exports some wheat and beans which are grown in the neighbourhood.

At the other or southern extremity of the bay lies the small town and port of Talcuhano, connected by railway with Conception and the main central valley. By means of this line of railway a considerable amount

of grain and flour is brought down to Talcuhano for shipment. The trade of the port is represented as 90,000 tons annually, and, as a place of shipment, it is rapidly increasing. It consists principally of the large warehouses necessary for storing grain and flour, and a few houses, which are greatly in request, during the summer months, by families from Santiago and the north who journey south to seek the refreshing breezes of a colder climate.

The more important town of Conception lies eight miles inland, and has been entirely built since the year 1835. A few miles from Talcuhano, but on the water's edge, is a little fishing village, called Penco, where the town of Conception was originally founded by Don Pedro Valdivia in 1550. But this town was destroyed over and over again by the Araucanian Indians. Conception has a history of destruction and resuscitation. In 1730 it was annihilated by an earthquake, and then rebuilt on its present site in the valley of Mocha, so called, by the way, owing to a settlement of emigrants from that island, who, in consequence of the depredations of Edward Davis, the English buccaneer, had left their homes and taken refuge there in 1686. The great earthquake and tidal wave of 1835 completely destroyed the town. This calamity has been described as the most severe which ever visited the south of Chili. The effects of the tidal wave were terrible, for it swept up the Bay of Talcuhano, destroying all the shipping, then rushed

over the land, levelling everything on its passage for miles inland. Mr. Darwin, in his "Diary of a Naturalist"—a book ever new and ever charming—describes his visit to the town some days after the passage of the tidal wave and earthquake, and the effects may best be gathered from his own words:—"In Conception each house, or row of houses, stood by itself, a heap or line of ruins; but in Talcuhano, owing to the great wave, little more than one layer of bricks, tiles and timber, with here and there part of a wall left standing, could be distinguished." The wave and earthquake not only destroyed Conception and Talcuhano, but seventy villages besides. Now, of course, the towns have been rebuilt, and nothing remains to remind the traveller of the catastrophe, nor, judging from the solid appearance of the buildings and the unconcerned appearance of the inhabitants, would any one suppose that the country is liable to such terrible visitations.

From Talcuhano we steamed away through the southern sound between the island and the mainland, a difficult and narrow passage which, in the project of the Government Arsenal, it is proposed to close up altogether. The next port visited was Coronel, celebrated for its coal mines. There is little trade here except in coal; but the steamers always exchange a general cargo to supply the wants of a large mining population. Coronel is only an anchorage for ships a few hundred yards from the beach, and within the

extensive Bay of Arauco. The coal is loaded into barges, containing about twenty tons, from the colliery stages, and towed alongside the vessels by small tugs. In the case of the Pacific steamers the bunkers are filled by hand, and at this hard work the Chilian labourer displays an endurance and strength not easily equalled in any part of the world.

A few miles south of Coronel is the port of Lota, already mentioned, where coal and copper from the Cousiño works are shipped. But, independent of this, the little place has a trade in grain and "lingue," the latter being the bark of a tree which grows plentifully in some parts of the south of Chili, and is quite as applicable to tanning leather as the bark of the European oak. This product, which is a staple trade of the small southern ports, is almost entirely used in the country, and principally at Valdivia, where large tanneries are established. The coast line from Lota to Lebu is rock-bound and rather monotonous, though here and there, where sunken rocks exist, the long graceful waves of the Pacific Ocean are seen breaking into foam at the foot of the bold escarpment. At Lebu the rocks open out to form a small bay, and, as we approached the anchorage, I caught a glimpse of a pretty valley, with a rippling little stream meandering down to a sandy beach which lined the sea-shore.

The little town of Lebu is quite a modern creation.

It partly owes its existence to the coal-seams which were discovered in 1860, and takes its name from the river, called by the Indians Lebu or Levu, which signifies *water* in their language. A small plain lies at the foot of the hill, through which the river flows into the sea. On the southern bank lies the town; on the northern rank grass still grows among drifts of sand. A bar is formed at the mouth of the river by the sand, which forms a little beach to the north. But on the south of the river's mouth the heavy waves of the ocean break noisily over half-sunken rocks. Within the bar lie colliery barges, moored to the loading-stages; and at the extreme southern point of the land, just above the breakers, is a settlement of whalers, living in small wooden huts, pitched promiscuously on the hillside, whence they watch the surface of the ocean for the appearance of a whale. They possess a number of good four-oared boats, are splendid sailors, and venture out in almost any weather in pursuit of their calling. Whales are plentiful at times in these waters, but they are not easily killed, and these men earn a precarious existence, which they manage to eke out by manning the coal barges.

The hills around the town and colliery are devoid of timber, though not many years ago they were covered with a virgin forest; and the country in general is thickly wooded. The southern wind blows here with such force that no tree exposed to it grows to any great

height, and all are strongly bent towards the north. In travelling along the southern coast of Chili no compass is ever needed, as every tree or shrub points to the North Pole. Yet in the sheltered valleys the growth of trees and plants is most luxuriant. Vegetables of all kinds, and flowers of every description, flourish to perfection. The rose in particular grows to great beauty and in abundance. The climate, though wet and boisterous, is temperate. The mean temperature for the year is about 56° Fahr., and the thermometer never falls below 46°. The land has been so recently reclaimed from the Indians that very little of it is as yet under cultivation, except in the valley of the river.

Before the year 1860 the district of Lebu was only known as a battle-field between the Spanish or Chilian soldiers and the native tribes. The first military fort at Lebu was established at the time of Valdivia, in the year 1550. Since then other forts have been constructed in the valley of the river, and eventually the entire district has been brought under the authority of the Government. The Araucanians have mostly retired further south, and the few that remain on the soil acknowledge the supremacy of the Chilian Government, and live as peaceful citizens of the land.

When the coal-beds were discovered by Dr. McKay in or about 1860, he was able to secure a good deal of the land by purchase from the Indians, and

soon afterwards the town of Lebu was founded by the Government on the site of one of the old forts. The coal mines were opened, and a scanty population of labourers settled around them. The ground began soon to be cleared of the forest and tilled, and now, all along the banks of the river for about ten miles, every little vale or plain is cultivated and grows wheat, so that a considerable quantity is brought to Lebu for shipment.

According to the law of Chili the proprietary rights of the Indian inhabitants have to be respected if they submit peacefully to the authority of the Government. But great difficulty is experienced in securing a title to land held by these people, as they themselves have no distinct rights, but live on the land, under their chiefs, in true patriarchal fashion. The chief or cacique has the greatest claim on the property, and must be settled with first. When terms have been arranged with him, the individual rights of those living on the land must be acquired by payments, varying from several thousand dollars down to the value of a bottle of spirits. The latter plays an important part in every "negocio" of this kind, and frequently more is accomplished by a liberal donation of alcohol than by a fair payment of coin. When these claims are settled and duly ratified in presence of the Prefect of the Province and his legal assessor, a title is made out, which can then be transferred or disposed of.

PINE TREES.

I went up the River Lebu as far as a boat could go, and was charmed with the scenery. It is not wild nor romantic, but homely and graceful. The hills are rounded, and slope gently down to the river side, and, where the hand of the agriculturist has not been at work, these slopes are covered with a dense forest of different trees, with foliage of great diversity of colour. The forest is thick with undergrowth of bamboos, ferns and shrubs, and numerous creepers or parasites grow among the branches of the trees in tangled masses, which bid defiance to the unwary traveller who would attempt a passage. The river banks are adorned with rose bushes and other flowers, sweet-scented and beautiful. In one little nook I saw an Indian family quietly working in their field, and cultivating the bean and potato, the principal diet of the aborigines. Few people were about, and nature was seen in its own perfect simplicity. The wild pigeon watched our passage from the tree-tops with indifference, and the startled fish fairly jumped out of the water to avoid the boat. The river is not navigable for more than ten miles, owing to the rapids, over which it is impossible to float. At the end of our journey, close to the rapids, we went ashore, and sought the hospitality of a small farmer in his "rancho," or hut, made of slender branches, twisted like basket-work into airy walls.

Here, we found only the female members of the household, who, however, received us with that courtesy of man-

ner so peculiar to Spaniards. The rancho consisted of one large chamber in which the family dwelt, and a smaller and separate one used for cooking. The furniture was simple in the extreme, and the walls were decorated with a few bad prints of saints and a collection of empty bottles. A couple of fowls were soon caught, killed, and boiled up with potatoes and onions into a "*Cazuela*," the national dish of Chili. We found the people very talkative, a peculiarity of all Chilians of the lower order. The elder woman, in especial, kept up a constant fire of conversation intermixed with laughter. They do not require any answers, but are very much offended if they are not listened to. Of course we showed our knowledge of manners and customs by frequently offering cigarettes, which were always received with graceful acknowledgments. The settlers in the forest lead a lonely life, but not a comfortless one. The climate is so good that their wants are few, and nature so lavish that, with little exertion, they might command what in Northern Europe would be considered luxuries. Although the river is not navigable beyond a few miles, geographically it has great importance, as forming a break in the rocky coast, and providing a means of communication with the interior. The land from the coast at Lebu extends in an undulating plain, elevated about 600 feet above the level of the sea to the foot of the "Cordillera de la Costa" (called at this point locally "Cordillera de la Nahuelbuta," signifying "mountain of

the tigers" in Indian), a width of some fifty to sixty miles, and this vast plain, now almost entirely covered with forest, will some day be brought under cultivation, and yield extremely fine crops of wheat. The clearing and tilling of the ground is retarded by the paucity of hands, and also by the want of roads. In spite of these drawbacks, the quantity of produce carted across over a rough country road from Cañete, a small town forty miles from Lebu to the latter port, amounted in 1878 to about 50,000 bushels, including wheat, barley, maize, beans, grass and potatoes.

In view of this existing produce, and what must follow in future as the land becomes more tilled, it may be predicted that sooner or later the quiet valley of the Lebu will echo the whistle of a railway locomotive. Meantime, the construction of a few good roads in the South of Chili would be a great furtherance to agricultural and commercial enterprises. Communication between the different centres is now entirely carried on by sea. From the different little ports roads run up into the interior; but there exists either no communication, or a very insufficient one, between the different towns by land. A road, or rather an excuse for one, exists from Conception to Lebu, but there it stops, and Valdivia can only be reached by sea. It must, however, be stated that the ground between Lebu and Valdivia has only recently been occupied by Chilian troops, and that in fact, at present, it is still partly in

the hands of Indians. Valdivia, one of the most thriving towns in Chili, forms an isolated province surrounded by Indian tribes. The town is one of the busiest in Chili, and is mostly inhabited by Germans, who have introduced trades and manufactures, and prospered. Excellent beer is brewed here, and extensive leather tanneries and distilleries are in full operation.

The want of population in the South of Chili has occupied the attention of the Government for many years. In 1853 a territory in the far south was set apart for immigrants. The province is called Llanquilue, and its capital Puerto-Montt. Special conditions of settlement were fixed in 1858 by the Chilian Congress. According to these, every head of a family received a grant of forty-eight acres of land, with a further grant of twenty-four acres for every male child which reached the age of ten years; the immigrants were landed free of cost at the nearest port to the colony, and received a monthly pension of fifteen dollars for the first year. The necessary seeds for the first season, a couple of oxen, a cow, a calf, 500 planks for building purposes, and 100 pounds of nails were supplied at cost price, to be refunded by yearly instalments, free of interest. They were free from all taxes, though entitled to the rights of Chilian citizens, for a term of fifteen years, and allowed to exercise their own religious worship. About 2,000 Germans settled in the

new colony, and the prosperity of Valdivia is almost entirely due to their industry. Puerto-Montt still exists as a colony, but the town has not increased so rapidly as its more favoured neighbour. I heard that the Congress encouraged the immigration of Germans specially from the southern and Roman Catholic countries. During discussions on the subject, Italians and even Irish had been proposed. But the former, though excellent workmen, make bad colonists; and the results recorded in North America of Irish immigration are not encouraging.

It seemed to me strange, in visiting this healthy and beautiful country, that a greater number of emigrants from Europe had not chosen it for a home. Every encouragement and assistance seems given to the determined immigrant; and with a soil so fertile, an ordinary husbandman ought to achieve a substantial success. Hitherto, immigration from England to South America has been almost entirely restricted to the eastern coast. The River Plate and its boundless plains, so well adapted for raising cattle, have attracted many young men to seek fortunes, while enjoying the free and somewhat rough life of the pampas. But few have turned their attention to the rich agricultural lands of Chili or Peru. Probably because these countries are less known; perhaps because they are so much more distant. The west coast of South America is, in fact, more known as a mineral than an agricultural country,

and is associated in people's minds with gold, silver and copper, or guano and nitrate of soda. Yet, in the south of Chili, and the interior of Peru, there exist uncultivated tracts of land, where the most valuable crops will grow, and which offer a safer and more profitable investment for capital, and much more sure return for individual labour, than the speculative prospects even of the wonderfully rich mines in which the country abounds.

CHAPTER III.

The Coal of South Chili—Lebu—Early Trials at Conception—Lota Colliery—Puchoco Colliery—Working Coal below the Sea—Value of the Coal—Chili Workmen—Superstitions—Mine Establishments and Hospitality.

THE agricultural produce of the land is not the only source of wealth existing in the south of Chili. Coal has been found in great abundance, and over a line of coast stretching from the river Biobio to the Straits of Magellan. At Lebu coal was discovered in 1860, and since then has been worked on a small scale. The coal beds here, as along the coast, belong to the tertiary geological system, which here lies directly on the granitic rocks of the Cordillera, assuming the same inclination, and dipping down below the Pacific Ocean. At Lebu some geological cause has reversed the general inclination, and the carboniferous strata incline towards the east.

Possibly the ground which now forms the bold escarpment of the coast may, at some time, have been upheaved into its present position, thus altering the dip near the coast to a diametrically opposite direction. At any rate, the seams are distinctly seen like black bands in the wall-like rocks of the coast, and are won by

means of shafts sunk down on the outcrops. At first, the workings were commenced by galleries driven in the coal, but this method was soon abandoned, and several pits sunk down to the coal seams. There are three seams known and worked, having respective thicknesses of three feet, three feet six inches, and six feet. The depths at which they are at present worked are moderate, being from 100 to 270 yards. The seams resemble the coal of the palæozoic period in colour, fracture, density, and almost in quality. They yield inflammable gas, and precautions have to be used against explosions in the mines. The lower seam is exclusively worked with safety lamps in order to avoid accidents: otherwise the seams are easily wrought. The area of carboniferous strata is considerable, as it extends for twenty miles inland, but the coal has not been proved under this extent of surface, although outcrops have been found which lead to the inference that a much greater extent of coal-bearing strata exists than is at present known. The ground is not free from faults, and dislocations, and these constitute a difficulty in the economic working of the seams; but the coal can, nevertheless, be wrought to profit. Although coal is traced along the coast from the Straits northwards, and has been opened out and tried at Sandy Point and some other places, Lebu is the most southern spot where it has been, and is, regularly worked.

To the north of Lebu, collieries have been in exist-

ence for many years, and at the present time many pits are in full activity along the Bay of Arauco and at Lota. Between this place and Lebu, a distance of seventy miles, although the carboniferous strata are continuous, and coal outcrops are known, the seams have not as yet been found in a workable condition. The nearest colliery to Lebu is, therefore, Lota, which is also the oldest and largest in the country. Coal had been known to exist in the vicinity of the town of Conception as early as 1825, and in 1835, Mr. Wheelright, the founder of the Pacific Steam Navigation Company, made some attempts to develop it; but these early trials were not successful, and the coal seams were not worked until some years later, when Don Matias Cousiño opened out the collieries at Lota. At first some difficulty was experienced in finding a sale for the produce of these mines. At that time there was no great demand, because the steam shipping along the coast was confined to the few steamers possessed by the Pacific Navigation Company, and the smelting of copper was almost in its infancy. Probably, also, the coal raised in the beginning was of inferior quality. For years, only the large coal from the Lota mines could find a sale, and the small had to be laid aside until the stock amounted to many thousand tons. Then, Don Matias Cousiño determined to establish a copper smelting work, bringing the rich copper ores of the north down to his coal mines, and using

up the small coal, then unsaleable, for smelting. This plan proved eminently successful; the small coal answered well for the purpose, and the works have been in profitable activity ever since. Now, besides the various pits raising about 800 tons of coal a day, there are twenty copper furnaces at work, and large fire-brick and tile works, the products of which are used at nearly all the principal metallurgical works of the country. The harbour of Lota presents a lively picture of commercial activity, with sailing craft of all sizes, and always several large steamers belonging to the Lota Company, loading and discharging coals, copper, and minerals.

The underground operations are very extensive, and the inclines under the ocean have attained a length of upwards of a mile. At Lota the coal measures dip to the west and crop out close to the sea-shore, so that very little of the coal-bearing strata is under the land. Shafts are sunk some distance from the water line, in barren ground, and from the bottom of these pits, levels are driven to intersect the coal seams. The same system is followed in all the mines along this part of the coast, and it may be truly said that, practically, the whole coal-field lies under the Pacific Ocean. The raising of the coal under these circumstances is more expensive than it would otherwise be. Large pillars have to be left in order to support the roof under water, and much of the coal is lost. Then, the dip

inclines soon attain great lengths, and increase the cost of raising by the long distance the coal has to be conveyed. At Lota and the other neighbouring collieries five seams are worked, having an average thickness of three feet, three feet six inches, two feet, four feet, and five feet. Some of these seams are suitable for manufacturing gas, others for locomotive or steam purposes, but they are all good smelting coals. The Lota colliery supplies the state railways, the gasworks, and many smelting works in the north, besides the copper and brickworks of the company. The establishment is on a very large scale, and the number of persons employed amounts to over a thousand people. The mining village is neat, and the workmen well housed. In this respect Lota is superior to all the other works I visited. The manager's residence and so-called "establimiento" is situated within the enclosures of the private park, and is pleasantly placed among trees and flower beds. By good fortune the prevailing south winds carry off the smoke of the works up a small valley behind the sort of promontory on which the park is situated, which thus escapes its deleterious effects. But the hills on the line of the prevailing current are burnt and poisoned; nothing ever grows there, and the ground presents a barren surface of brown waste. Passing northward from Lota no working colliery is found until Puchoco, although several pits have been sunk, and the coal under the sea intersected;

but for various reasons these enterprises have not been successful.

The large colliery of Puchoco is situated on the northern extremity of the Bay of Arauco. As at Lota, the works were designed and carried out by English engineers, and the place seems like a transplanted corner of the county of Durham. The workings are almost entirely under the sea, one incline extending over 800 yards. The same seams as at Lota are worked, though varying somewhat in quality; and the quantity raised amounts to about 500 tons a day. The Puchoco Company supply the Pacific Steam Navigation Company, and generally find a good demand for their coals. The various pits are connected with the loading wharves by railways, and all day long locomotives are seen dragging train loads of coals or bricks to the loading stages in the harbour, where ships are waiting for freights.

The mines are not so pleasantly situated as those of Lota, being in the centre of a dreary desert where no vegetation exists, and over which the colliery village is irregularly scattered. The place has somewhat more of the squalor and dirt usual in mining villages, and has nothing to recommend it. Northwards of Puchoco there are two other collieries of some importance, one belonging to Messrs. Rojas and Co., which is the only one in this district not working under the sea. It is, in this respect, fortunate, because here coal can be raised

without dread of the surface subsiding. The other, owned by Mr. Schwager, has been only recently opened out. The faults or dislocations in the strata here, as at Lebu, are not only numerous, but very important. The measures are thrown up or down, as the case may be, for 50 or 100 yards at a time, and the workings underground are greatly complicated by these changes in level. These dislocations, though always feeders, are, however, not the means of carrying any great volume of water; and no mine has as yet been drowned out, though working so far under the ocean. But the faults present an element of danger, inso-much as they are worked up to in the different collieries as boundary lines, and are left as barriers. An aban-doned portion of a mine may be full of water on the upper side of one of these faults, and should the neigh-bouring colliery owner on the dip side cut through the fault in the course of working, he may be drowned out by suddenly tapping a large reservoir of water. These faults form not only a scientific boundary for the underground workings of the collieries, but are fre-quently used, in the absence of any other, as a practical boundary of the field of coal to be worked; for there is no law in Chili defining the proprietorship of coal lying under the ocean.

When the mining laws of Chili were framed in the beginning of the century, coal was not known, or, if known to exist, was not worked. The mining

regulations do not extend therefore to this mineral, which belongs to the owner of the soil. It, however, so happens that the greater part of the coal seams hitherto worked lie under the bed of the Pacific Ocean, which no one can with justice claim as property. The early workers simply extracted the coal without asking leave to do so from any one. Those who followed were looked on by the early workers as intruders, and many means, some even discreditable, were resorted to in order to prevent them opening out new collieries. The galleries were inundated with water when possible from above, and when that could not be effected, fumes of sulphur and mercury, sometimes mixed with aji or red pepper, were forced into the galleries from below. The miner in these collieries is in terror of his neighbour, and large barriers of coal are left and practically lost to preserve the safety of the workings. It was related to me that a proprietor whose mine lies on the dip side of the adjoining one, and consequently could be, and was, inundated at the pleasure of the owner of the latter, was in the habit when the water was too much for his pumps to clear out, to send imploring messages to his neighbour not to send him too much water for a day or two. The evil of this want of system is the direct loss to the nation of so much coal wasted in the shape of pillars or ribs to protect the workings of each colliery against its neighbour.

It is most unfortunate for the interests of the country at large that such a state of things should ever have existed, and is still allowed to continue. This coal-field constitutes one of the greatest sources of wealth of the Republic, and its mineral wealth, which ought to be husbanded with the greatest care, is thus allowed to be wasted from want of a simple yet necessary ordinance. The immediate effect of this state of affairs is that the coal industry is hampered, and that the field is neither worked as it ought to be, nor developed as it might be. It requires a courageous capitalist to face not only the difficulties and dangers of a submarine mine, but the persecution and malice of his immediate neighbours.

The total quantity now raised at the various collieries amounts to about half a million tons per annum, which find a ready sale along the coast, to smelting works, steamers, and railways; and it may be expected that the demand will increase with the extension of steam navigation and the development of the railways in the interior of the country.

At first when this coal was raised it was considered unsuitable for steamers or locomotives; and, for years, the railways of the country were supplied with English coal at a very great cost, until a mechanical engineer, by a simple contrivance in the grate of the locomotive, enabled the Chili coal to be used with effect: since then nothing else is burnt. The railways of Chili are still in their infancy, and the immediate

future will witness many miles of iron road laid down. There are few countries in the world which offer a fairer prospect for railway construction. In fact, the whole of the south of Chili is suffering at present, and is sadly retarded in its development through the want of roads of any kind. To the observant traveller it seems strange that the coal-fields have not long ago been joined to the trunk line which runs down the great central valley from Santiago. The distance to Conception, is barely seventy miles, and the road passes over a country offering no difficulties to the railway engineer. This junction will, no doubt, be effected in time, and, when it is completed, the coal-fields will be heavily taxed to supply the increased demand for fuel.

In one respect this coal-field has a great advantage, and that is in the supply of labour. Although Chili is scantily populated, there is no dearth of labour for mining. The occupation seems to suit the hardy child of the soil, descendant of the wild aborigines; and, although the fields may be deserted, the mine finds plenty of hands. The workman of Chili, called a "*peon*," is sufficiently diligent and intelligent to be useful at almost every kind of labour. His instinct is, however, nomad, and he prefers wandering from mine to mine to settling down permanently in any locality. His wants are few and easily satisfied. He is content if he can boast of a roof, however primitive, under which to lay his head—a mere hut or hovel where

he can cook his cazuela at a wood fire for his generally numerous family. As a rule, the Chilians have large families, and, among the lower classes, the little ones run about from a tender age among the dirt and dust of the mines with scanty, and sometimes even less than scanty, clothing. The wife and mother is not a favourable specimen of womankind. All the women in the country, from the highest Don's wife or daughter down to the *peon's*, delight in wearing dresses with ridiculously long trains. In the case of the latter the cotton tail soon becomes draggled in the mud and filth of the village lane, and adds greatly to her dishevelled and slatternly appearance. Few of the *peons* are really married. They agree, generally in early life, with some girl, to live together, for better or for worse, and, as a rule, they continue to do so till the great unavoidable separation takes place. Amongst this class there is a great mixture of Indian blood, and many of them are as wild as their forefathers. Superstition is rife among them, and few have any clear idea of the meaning of the religion they profess. One curious habit, which, though still common, is gradually dying out, came under my notice, namely, the manner of holding a wake over the body of a dead child. The little thing is decked out in finery it never had a chance of wearing while alive; its head is circled with a wreath of flowers, its neck adorned with strings of beads, the hair neatly plaited, and the face painted in rose colour; and in this condition it is fixed up on a

table in the corner of the hut, and left for weeks before burial, the object of the curiosity and admiration of the neighbours. During this time, such festivities as the parents can afford are freely indulged in.

The usual amusement of the *peon* is drink. He has but one other pleasure, and that is riding; but the collier cannot often indulge in this pastime, so he devotes his spare time, and more than his spare cash, to intoxication. During the fortnight, he lives poorly and works hard, and when the pay day comes he carries his hard-earned dollars to the dram shop, where he spends them in return for divers vile alcoholic beverages concocted in the country, and made of corn, maize, or grape. His dress is simple in the extreme: a shirt, a pair of trousers, and a slouched hat suffice, with the addition of the never-failing poncho. This latter garment, a rug or a blanket with a hole in the centre, through which the head is passed, is the usual and general covering of the *peon*, and even of his betters, when in the country. The poncho is of Indian origin, woven by the women and forming the garment of both sexes. It is not only a very simple but a very convenient and extremely useful covering at times. In riding, nothing can be better than a poncho, which completely protects the rider against rain or dust, and is above the imperfection of seams or buttons. The peon delights in a many-striped poncho of gaudy colours, usually red, green, and yellow.

As all the mines in Chili have been opened out in

recent times, and in places where no other inducement, save the mining industry, existed to build, the owners of mines have always had to provide huts for the workmen and houses for the overmen, clerks, and managers. It is the universal custom at mines in Chili to have a large house called "establimiento," or sometimes "Casa Grande," where the owner or his representative, or the manager in the case of a public company, resides, and where all the unmarried employés and guests, or travellers, find board and lodging. In most cases the sleeping apartments are in a separate building, but the repasts are held in the large house, and here all those who are connected with the management of the works assemble at meal times. In many cases a billiard-room is provided, where the "young men" may spend their evenings in the enjoyment of an innocent amusement. This system is advisable, if not absolutely necessary, as most of the mines are situated far from any towns or even villages, except the miserable collection of huts exclusively inhabited by the miners and labourers employed at the works.

My first introduction to an "establimiento" was at the coal mines at Lebu, where I was hospitably received and kindly housed for some days. This establishment, although more rough than the average, may well serve as a type of others. At 6.30 A.M., a servant hammered violently on a triangle of iron with something like an ordinary poker, producing noise enough to waken the

sleepers for a mile around; and again at 7.30 to summon the guests to an early repast, consisting of coffee, tea, eggs and cold meat. The coffee, by the way, from Bolivia, was the best I ever tasted, but the butter always execrable. In Chili, soft boiled eggs are eaten in a wineglass. The shells have to be broken on the edge of the glass, and the egg then dropped into it, mixed up with salt, and eaten with a spoon. This is easy enough when one is accustomed to it, but I found at first great difficulty in not spilling half the egg on my lap or over the table. The breakfast or "déjeûner" was served at 11.30, and consisted always of a sort of broth made of tough chicken, or tougher meat, boiled up with potatoes and other vegetables, and called a *cazuela*. It is a sort of national dish, and whenever a traveller arrives anywhere out of regular meal hours, he is offered a *cazuela* as a makeshift. It is very nice when well cooked, but at Lebu it was always greasy and nasty, with little islands of fat floating among the potatoes; and if allowed to get cold this soup would solidify into tallow. After this, as a rule, came a lump of parched meat, solemnly termed a beefsteak, with a fried egg on the top; and eventually a piece of solid palm oil called cheese. The dinner commenced also with a *cazuela*, which was followed by boiled meat served up with badly-cooked potatoes, evil-smelling greens, and rice. The meat, of course, had no taste.

It was merely a brown fibrous substance without strength or virtue, having probably been boiling for the whole day. Sometimes we got a rather tasteless sort of fish served up with a sickly sauce, or a shell-fish peculiar to the South Pacific coast, and not at all likely to be imported to other shores. The dinner ended with roast meat, but so much overdone, and so hard and tasteless, that pickles, Worcester sauce, red and black pepper, and every available condiment had to be resorted to in order to coax this food down. The sweets consisted generally of an omelette as tough as brown paper. On the other hand, we enjoyed fair claret from France, and very good wine grown in the country, also a cup of exquisite coffee, and a good cigar. I must here say, in justice to the Chili *cuisine* generally, and also to the establishments at mines in particular, that the feeding at Lebu was far below the average. This was owing principally to the absence of proper attendants, good servants being difficult to procure in so distant a spot.

Although the comforts of the mining establishments vary with the situation and resources of the neighbourhood, they are all similar in respect to hospitality and civility to strangers or travellers; and whatever may be the resources of the house, they are offered with a goodwill and kindness which compensate for the roughness of the fare.

CHAPTER IV.

Conception—Angol—Forts near Indian Territory—Ride to Hacienda—Ercilla—Village of Colliforulli—Ercilla.

After spending several weeks among the collieries of the coast we determined on a journey to the interior and a visit to the Araucanian Indians, who still inhabit the southern part of Chili. A visit to Araucania is now made easy by the railway recently constructed from Conception to the little town of Angol, which lies on the confines of the Indian territory.

We started, therefore, one rainy morning from Coronel for Conception, a distance of about thirty English miles. Our journey was performed partly on horseback, and partly in a rumbling jolting coach, in which we clung to the seats, during five hours.

The rain stopped very shortly after we started, and, as the sun rose, we found ourselves enveloped in a suffocating cloud of dust.

Opposite the town of Conception we reached the River Biobio, which here is a wide and shallow stream, choked with great banks of shifting volcanic sand. At the point where we crossed the river it is

nearly two miles wide, and we were taken over in a flat-bottomed craft closely resembling the nursery conception of Noah's Ark.

The navigation of the river at its mouth is at present impossible, and it would require constant dredging to render and keep it open. When we reached the other side we were carried on men's shoulders from the ark to the land, and then conveyed onwards to the town in another coach, and deposited at the hotel, which we found clean, comfortable, and somewhat cosmopolitan. We then took the opportunity of visiting this town of many vicissitudes. We found it a quiet, rather sleepy-looking place, with broad, rectangular streets, flanked by low, whitewashed houses. People are timid about erecting lofty buildings on account of the earthquakes, and a two-storied house, or a high church steeple, is a rare occurrence in Conception. There is a Plaza, of course, with a fountain in the centre, surrounded by a few flower beds, flanked by some fine trees. In the day-time it seemed more like a deserted town than the inhabited capital of a large province. But then it is not the custom in these latitudes to walk forth during the day, except to go to church. In the evening the Plaza was tolerably alive with well-dressed promenaders. The town is bounded on the east by a magnificent avenue of poplars, known as the "*Alameda*," but the broad walk was grass-grown, and this place seemed deserted by the inhabitants. Although the town, to us,

seemed asleep, we were informed by residents that it was, during the season, namely, the winter months, a very gay and pleasant place. It is mostly inhabited by landowners, who in summer reside on their estates, but in winter come up to their houses in Conception. These landowners, or squires, if I may use the term, form in themselves, not only at Conception, but generally in Chili, an important class of somewhat conservative but thoroughly independent citizens. They are wealthy, secure of their income from landed property, and are the most influential inhabitants of the country. Many of them make a point of paying at least one visit to Europe, and import to their distant homes some taste for elegance and refinement. Music is very generally cultivated, particularly by young ladies, and in Conception, and I may say in Chili, there are few houses of any pretension without a piano. This description does not, however, apply to all the landowners of Chili. Many, indeed most of them, live on their estates as simple farmers. They are rude and uneducated, and are contented with a frugal fare and the rough amusements of a bush life. But they are, notwithstanding, intelligent and patriotic, and form a steady class, supporting order and peace.

We had not time to make a minute survey of the town, but remarked the great number of churches it contained. Conception is the seat of a Bishopric, and besides the Cathedral, a rather plain building decorated

not in the best of taste, it contains a number of churches and five monasteries.

The line of railway from Santiago to Conception branches off some miles to the north of the latter town, to run down south to Angol, and we started by a morning train on our way to the southern wilds of Araucania. The line for some distance runs along the banks of the Biobio, which becomes narrower and deeper, and runs through a small valley, flanked by rounded hills, either covered with trees, or under cultivation. After some hours' journey we reached the junction, where we had to change into the southern train, and soon afterwards crossed the River Biobio.

For many years the Biobio formed the boundary between the Spaniards and the Araucanians, and its waters have often been red with the blood of the invaders. Valdivia crossed it, for the first time, in February, 1551, on his march to the south, when he founded the town of Imperial on the River Cauten. Two years later he again crossed it, and marched down the central valley till he came to a spot which he declared was more beautiful than any he had ever seen, and here he founded Angol, in 1553. This place shared the fate of all the Spanish settlements in the south of Chili, which were taken and destroyed by the Araucanian Indians during the long wars of extermination carried on against them. At the commencement of the seventeenth century not one of the Spanish

towns remained standing. Since then a great part of the territory has been reconquered, and many of them have been rebuilt on the old sites. We thus have Angol, Cañete, Lebu, all founded within the last twenty years on the ground occupied by old Spanish settlements. The present town of Angol was built in 1862, and contains about 4,000 inhabitants, exclusive of the garrison.

After crossing the Biobio, the line runs direct south, along the Great Southern valley, amid rich fields of corn and pastures crowded with cattle. Here and there are farm-houses or shepherd's huts, and at intervals the mansions of the landowners. The country on either side is slightly undulating and beautifully wooded, and were it not for the majestic snow-capped mountain-chain of the Andes, which is seen in the distance, the traveller might imagine himself in Surrey.

But these mighty mountains, rising up some 15,000 or 20,000 feet, with here and there a dark cloud over a high peak denoting a smouldering volcano, quite destroy the comparison. We travelled the whole day through the same sort of country, with this difference, that, as we neared the end of our journey, the farms appeared not so well attended to, and, close to Angol, a good deal of the land was entirely out of cultivation. The little town seemed quite alive when we reached it; the streets were crowded with cattle, Indians, soldiers, and civilians. The cattle had been driven into the town for safety; the Indians had come in to make pur-

chases and to drink spirits; the soldiers were patrolling; and the people generally seemed to be promenading the streets. Our first step was to secure a shelter at the hostelry, if the dirty and unsavoury little place bearing the word "hotel" in huge letters over the front door could be thus described. Our next, to arrange about future movements, and hold a council of war.

Our party consisted of my companion the engineer, his friend (a gentleman of position in the country), and myself. The "Don," as we familiarly called him, had a letter to the part owner and manager of a large farm, situated on the confines of the Indian territory, about fifty miles inland from Angol. He had written to this gentleman, and expected to be met by some one with horses. The letter, however, had miscarried, and we were left to our own devices. Fortunately the "Don" was a man of action and resources. He at once called on the military governor and explained matters. Here he learned that the country was not considered quite safe, as the forts were meagrely garrisoned, and only by militia, as all the troops had been called away to the war. But the governor offered to give us an escort of a sergeant and a couple of men, who would act as protectors and guides as well. This offer was accepted, and an order issued at once to carry it into effect. The real difficulty was to secure horses. In the outlying districts in Chili, although almost every

person owns a horse, it is sometimes difficult to obtain one for hire. I could not fathom all the diplomatic negotiations which were required to secure steeds, but I may record that it was midnight before the matter was definitely settled, and three horses promised for the next morning at five o'clock. Early in the morning the sergeant and his troopers were at the door of the inn, but the hired horses were not there. It was now necessary to send scouts all over the town to find the men and the horses they had engaged to provide. It was well-nigh seven before we made a start along a very good road, the best I had seen in Chili, in a direction due east. The road was the military line of communication between the forts intended to defend the districts to the north against the free Indians, who still occupy a large tract towards the south. The Indians are now held within a quadrangle of which these forts, constructed along the banks of the River Malleco, form the northern boundary. The Cordillera and the Pacific Ocean constitute the east and west limit, and the River Tolten, also fortified, forms the southern frontier.

The forts along the Malleco Valley are nine in number. We, however, only visited seven, named Angol, Huequen, Concura, Lotemo, Chiquaihue, Mariluan, and Collipulli. The land to the north of the line of forts is in the hands of the Chilian

Government, and has been sold on favourable terms to speculators or investors who have brought, or are bringing, the ground into cultivation, and must some day reap a large profit. This land was sold at about 6*d.* an English acre, but a good deal of money had to be spent in turning it over, and clearing it of timber, if covered with forests; in making roads, and erecting the necessary farm buildings. The farms in the neighbourhood of Angol vary in size from 5,000 to 20,000 acres. The main crop is wheat, which grows with great success in such a climate, and on such a soil. Although the country round Angol is now under cultivation, and to all outward appearances peaceable, yet farming is only prosecuted in safety within the protecting influence of the forts. Angol itself is a fort, holding a thousand men in ordinary times. The position of the little town is admirably chosen from a strategic point of view. It lies in a recess of mountains, formed by a spur of the Cordillera de la Costa, running down into the main valley. The heights behind the town are held by the Spaniards, and, on the open side, it is protected by a river which forms a moat, and is crossed by draw-bridges. The fort, properly so called, is constructed on a small eminence, a plain low building, capable of holding a company of men, surrounded by a deep ditch, and defended by six guns. All the forts are similar in construction, and are placed almost in a straight line one league or three English miles

distant from each other. They occupy heights either on the north or south of the valley of the Malleco. The south of this line is still considered Indian territory, where the free children of the land dwell according to their own ideas under the rule of their caciques. They have now been very quiet for some years, and, beyond an occasional raid on a farm-house, have done nothing to render the country unsafe.

However, people travelling even along the line of forts, and strangers especially, seek the protection of an escort, as the spirit of evil might tempt some of the Indians to attack a travelling party for the sake of plunder. We had nothing to fear from wayside marauders, having the protection of a guard. The sergeant was a regular old soldier, the hero of many exploits in the Indian wars; but the troopers were young and raw recruits. They were dressed in a French-fashioned uniform, over which they wore the never-failing poncho, were armed with carbines, revolvers, and swords, and mounted on small but strong horses. As we passed the different forts we had to ride up and inspect them to satisfy the military pride of our sergeant, who was eloquent in the recital of events and deeds connected with every yard of the ground over which we travelled.

For miles the road lay through a plain, covered with a short pampas grass. This land, lately secured, had not been sold as yet. After passing this ground we

came to a narrower valley, where the river flowed through small patches of cultivated land between banks rising up a couple of hundred feet.

We left the valley to gain the heights, and found ourselves again on a plain, reaching to the foot of the Cordillera, and almost entirely under cultivation. About midday we reached the fort of Collipulli, and soon afterwards the little village of the same name, a place situated on the border of the Indian territory. It consists of a few wide streets, lined with miserable wooden hovels. Many of these have signboards over the doors, and are either dram-shops or small stores, combining therewith the lucrative but sorry trade of pawnbroking. The latter is a thriving business in all the small towns bordering on the free Indian territory. The Indians gradually get accustomed to certain luxuries, especially spirits, and come to the shops frequently without money. In order to gratify their appetites they are ready to accept a loan, which the storekeeper or publican readily takes advantage of, and gives them what they require on the security of the family jewellery, such as silver brooches, earrings, and ornaments, or spurs and horse-trappings of the same metal. It is a melancholy reflection that the two principal accompaniments of misery, vice, and even crime—namely, the pawnshop and the dram-shop—should form the forerunners of advancing civilization among a wild and uncultivated race.

I had previously seen some Indians at Lebu, and others at Angol, but it was at Collipulli that I first saw them in numbers, and quite at home. They were standing in crowds before the dram-shops, and parading the streets in groups. The Araucanian Indian is a fine well-made fellow of average height, with a dark steady eye, and jet black hair. The colour of his skin is a light copper, and appears no darker than any skin would be when exposed to a broiling sun. In fact, young children are fair enough to pass muster for Italians. Both sexes have an upright bearing, walk well, and look you straight in the face. The men invariably wear a poncho, and another blanket or rug round their waist, and which hangs down like a petticoat to their feet, and which, when walking or riding, they tuck up between their legs, and look like Zouaves. Round their heads they tie a red handkerchief, below which the hair falls, and is invariably cut just below the ear. They rarely have much hair on the face, and a beard is almost unknown among them. The women wear their poncho in the form of a shawl, another piece of blue cloth round their shoulders and chest, and a third in guise of petticoat. The feet are usually naked—those of the women always—but the men sometimes indulge in boots. The women dress up their hair in a careful manner, worthy of the most civilized nations. The tresses are coiled round the head in a most artistic fashion, and interwoven

AN ARAUCANIAN OF ANGOL. [To face p. 56

with strings of beads. The end of each tress is further lengthened with long slips of brown cloth ornamented with silver buttons or glass beads. When rich they wear two, and sometimes three, pairs of large silver earrings, and as many necklaces, either made of beads, or leather studded with silver; the latter greatly resembling the silver collars now worn by young ladies in England. They secure their shawls with a round silver brooch the size of a cheese-plate, with a pin welded to it about nine inches long. The cloth which is used by men and women is woven by the latter, and coloured dark blue with some dye known to themselves. It is sometimes relieved with a neat little design of red and yellow, and the ponchos of the men generally have a few stripes of red at the ends. The appearance of the dark figure of the Indian with his scarlet head-gear on the desolate pampa is quaint and picturesque. The Indians in Collipulli seemed not to notice our presence at all; they passed along and went their way without deigning to look at us.

We paid a visit to the church and monastery of the friars, who have here established a school to reclaim and teach the young Indians. We visited the school and saw about a score of young urchins learning to read and write. These boys, after a few years' training, are placed out as farm servants or labourers, and many of them become absorbed in the general population. The proselytizing monk

is a prominent personage in the country, and, wherever a new settlement is founded, the church is one of the first buildings constructed, and the friar the earliest inhabitant. The monks now convert with a cross in one hand and a birch rod in the other; an improvement on their predecessors, who forced the Church of Rome on the heathen with the sword. Many of the boys, whom they kidnap, do not remain with them, but in a few years take to their heels and return to the wild bush, and the free savage life of their parents. Still, a good deal of absorption of the Indian element takes place in this way. After leaving Collipulli we had to take to cross-roads newly made on recently cultivated land. Our guides only knew of the general direction to reach the farm, and it was fortunate for us that the owner, who had by this time received the tardy letter, came out to meet us, otherwise we might have wandered about the plain for many hours in search of our destination. As it was, we soon reached the house, where we were hospitably received by the proprietor and his wife, and welcomed to Ercilla, a name, by the way, well known in Spanish literature.

The poet, Don Alonso de Ercilla y Zuniga, a soldier who accompanied Don Garcia Hurtado de Mendoza, to whom was entrusted the command of the Spanish troops in the South after Valdivia's death, and who led a successful campaign against the Araucanian Indians, wrote down his experience of the Indians in a

ARAUCANIAN WOMEN.

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poem entitled "L'Araucana," which gives an accurate description of the hostile character and powers of these people, against whom he fought for years, and whom he honoured as enemies.

The farm-house of Ercilla, constructed of wood, is pleasantly situated on the banks of a small stream and surrounded with trees. In front, is a recently laid-out garden, at the back a large yard for cattle, horses, and dogs. The actual farmstead is surrounded by a strong fence, and a ditch about sixteen feet wide and ten feet deep. Access to the yard can only be gained by a drawbridge, invariably raised at night. Although the Indians for some time have not been on the war-path, yet, occasionally, in bands of half a dozen to a score, they attack farm-houses, and lift the cattle. It is, however, a fact that these predatory expeditions are nearly always led by some Spanish desperado, bad character, or jail-bird hiding among the Indians. Unhappily, the border land is a sort of refuge for the vagabonds of the country, and the first acquaintances the wild man makes among his civilized conquerors are not by any means favourable specimens. From these outcasts of society they learn many evil ways which are not natural to them, and lose the good qualities of their primitive nature to become, under bad direction, deceitful, thieving scamps. The best security against such raids is found to be a goodly number of large, fierce and active dogs. These give

the alarm, and do their share of the fighting, if need be. We found a motley collection at the Hacienda Ercilla.

Dogs of all degrees, from the lurcher to the foxhound, about twenty in number, lean, wiry, almost wild; these brutes looked as if they could resist a whole tribe of Indians. When we reached the farm they were actively engaged in devouring the carcase of an ox, and, to me, they looked more like hyænas than the trusted friends of man. However, they are very useful in more ways than guarding the homestead, as we discovered when we came across a fox, on one of our rides, a few days later.

In addition to the dogs who kept watch, and the ditch, with its drawbridge, every one in the house was armed for further protection. The master and his servants carried revolvers and small cutlasses; and loaded guns and rifles were to be seen in the corner of every room. When evening came and the sun dipped down behind the great mountain chain, just tinging the white snow peaks with its last rays, the bridge was drawn up, the cattle counted, the men mustered, and every one retired to rest; as if in some besieged castle of mediæval time, and not in a quiet farm-house.

CHAPTER V.

Ercilla Farm—Among the Indians—Their Habits and Customs—Superstitions—A Matchituri—Canelo Tree—Hospitality among the Indians—Influence of Alcohol—Decrease of the Araucanians—Small Risings lately—The Future of the Race—Emmanuel Buonaparte.

We spent several happy days at Ercilla farm, riding about a charming country, on good little horses easy to mount and of great staying powers. Our saddles were comfortable, which is rather an exception in Chili, where, as a rule, the Mexican saddle, or a modification of it, is used. The common bit of the country is a most powerful instrument, more suitable for a regular "bolter" than the quiet little animals it is used for. It consists of a thick iron plate, made to rest on the horse's tongue, and to this is attached a heavy ring, passing under the jaw, to which the reins are fixed. It seems an instrument of torture, but as the animals are used to it, they prefer it to the English snaffle. The reins are frequently made of rope, and always end with a long thong, which is needful as a whip for the horse, or a weapon of defence against man or dog. Some of these thongs end in a heavy knot, or a ball filled with lead, and in this case are very dangerous weapons.

The Ercilla farm contains about four thousand acres, of which one-half is under cultivation, yielding a fine crop of wheat. This is the crop that pays best in this district. The yield is magnificent and the quality excellent. Our rides extended far beyond the waving fields of yellow corn, and we crossed, not only the limits of the farm, but the boundary of the Chilian territory, and paid visits to the Indians living in a state of semi-acquiescence with the laws of the country. Our first visit was to an Indian who was almost civilized, and spoke Spanish. Of course, in company with our kind host and guide, we were favoured and more civilly received than mere strangers. When we arrived at this man's hut a long palaver took place between the Indian and our host. Meantime we had leisure to observe a neighbouring family taking their midday meal. They were, to the number of eight, sitting under a sort of verandah, rudely constructed of branches, in front of their hut, enjoying a feed of boiled beans. This is almost the staple food of the Araucanian, wild or civilized. The family sat round a huge wooden bowl, and helped themselves with wooden spoons. Over the wood fire hung a copper pot, from which further supplies were obtained when needed. The conversation between the Indian and our host having terminated, we were asked to come inside the hut. It is seldom an Indian allows a stranger to enter his dwelling, and we were only made exceptions to this rule in consideration for our friend,

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A MID-DAY MEAL.

who was known and trusted by these suspicious people. The interior of the hut had an appearance of rough, yet homely and clean comfort, which rather surprised me. Everything seemed to have a place, and to be in its place. The hut was made of tree branches woven together like basket work, and in the centre was a small wood fire, round which the wives and children of the owner were gathered. He had three wives, of different ages, the youngest being quite a girl. Five children formed the family, and they had all the characteristics of their respective ages. The eldest boy, eight years of age, stared at us with childish curiosity; a girl of some six years old was shy, and kept hiding behind her mother; two smaller children played on, undisturbed by strangers, with some rude toys; and an infant slept innocently on its little cradle plank, to which, according to custom, the mothers tie their children, enveloped in lamb skins and pieces of cloth, and so as to be quite unable to move a limb. We began by offering cigarettes to all the ladies, an attention they seemed to appreciate; at least we judged so from the silent smile with which they rewarded our civility. But they neither moved nor spoke until their lord and master explained to them the friendly object of our visit, and then female curiosity asserted itself, and a long string of questions followed about the people who came from beyond the great water. They showed no great excitement, and their whole demeanour was contemplative and quiet. As a rule,

they are supremely indifferent to strangers. We also ascertained that they were not inclined to trade or sell. We were desirous of purchasing some of their trinkets as a souvenir, and offered far above the intrinsic value of the ornaments, but they would not part with them. This we found was the case invariably among the Araucanians. We spoke to many of them during our rides, and offered to purchase trinkets, or even a poncho, but without success. We offered one man not only twice the money value of his poncho but one of ours in exchange as well, but he refused our offer. Our visit to the friendly Indian came to a close with another cigarette all round, a sort of salaam, and a long palaver between the Indian and our host.

The Indian settlements are mostly on the banks of a little river called the Mininco, which forms a kind of boundary between their territory and that occupied by the Spaniards. Their huts are scattered about at some distance from each other, not forming anything like a village, but each quite independent and within a separate enclosure. They lead a happy, free life, as long as they keep clear of the fire-water; and at this spot, at the foot of the great Cordillera, far away from the line of approaching civilization, they are not exposed to much temptation. I was much struck in the course of my ride among these primitive people with the bashfulness and coyness of the young women and girls. If we happened to call at a hut when the

ARAUCANIAN GIRL.

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men were absent, the door was frequently closed in our faces, and, although the women sometimes came out to hold a palaver, they did so with evident modesty and reserve. Though not beautiful, many of them may be called pretty. Their bright black eyes, rosy cheeks, and pleasant smile give them a sort of rustic beauty. Women are early married, and the ceremonies preceding the marriage are curious, though not confined to the Indians of Araucania. The girls are strictly watched and kept within the paternal enclosure. When a suitor presents himself he always speaks first to the father, and settles with him the presents he has to give in return for his daughter. Some time afterwards he arrives at the bride's house, in the evening, on horseback, and accompanied by as many friends as he can muster. These make a great noise round the hut of the bride, and eventually force their way in, despite the opposition of the family, who pretend to resist the bridegroom, and they carry off the young damsel by force, amidst the loud wailings of her mother and female relations, and hand her over to the expectant bridegroom, who takes her up on his horse and flies away to the woods with her. After remaining in sylvan retirement for three or four days the happy couple return to the open, and go to the husband's hut, where the new wife is duly installed as one of the family. When a woman is near childbirth she seeks the solitude of the forest, where she undergoes the pains of parturition unattended,

and as soon as the child is born takes it to a running stream and washes it. It is then carefully wrapped up in clothes and securely fastened to a small board, to which it remains fixed until it can walk. Connubial quarrels or infidelities appear to be the exception. The hut of the Araucanian is generally peaceable and moral, except in the matter of drink.

Their religion is a simple one. They believe in three gods—the Great Spirit, and the Spirits of good and evil. The last is the one most invoked. If the weather is stormy and the crops not ripening; or if, on the other hand, a continuous drought keeps back the growing corn, a grand meeting is held under some tree, and the Deity appeased by long-winded speeches, continued howling, and the absorption of great quantities of "chacoli," or "aguardiente," if it can be obtained. The custom of drinking is usual at all their ceremonies, religious or otherwise, and specially so when a death occurs. Then a regular wake is held over the body. If the family of the defunct have no liquor, they hang the corpse up in the hut over the fire until they have obtained some sort of stimulant to drink his health on the long journey, and frequently the body is dried up to a mummy before it is buried. When the burial takes place, the corpse is laid in the ground with all the requisites for a long journey, food, clothing, and weapons; and if the body be that of a cacique, his horse is killed and placed in the

grave beside him, in order that he may ride on the way. Some of the tribes living near the coast, or on the banks of rivers, bury their dead in canoes to enable them to cross the waters.

During the ceremonial of burial the friends of the deceased form a ring round the grave with their lances crossed, in order, according to their superstition, to prevent the evil spirit entering the grave. They have a definite idea of the immortality of the soul, and a strong superstitious belief in their three gods. But their religion is not defined; they have no formula of creed, nor any temples or priesthood. The only personage invested among them with supernatural powers is the "Machi," prophetess, wise woman, and doctor of the tribe, who is believed to be able to drive the evil spirit from the bodies of the sick, and allay or incite him at will. She is generally called in to the side of any one suffering from illness, who is then believed to be possessed of the evil spirit, over whom she is supposed to have an influence, and is expected to force away.

I was fortunate enough to witness one of the Machi incantations in the course of a ride through the Indian country. Hearing a loud wail, apparently proceeding from a hut in the distance, we rode up to ascertain the cause. Long before we neared the habitation, we had to pass a cordon of children, some of whom ran to the hut before us, apparently to announce our arrival. As we

approached, we saw a crowd of Indians, some in blue and some in scarlet ponchos, in front of the hut, and a number of others walking round it with long bamboos, beating the roof and howling loudly all the time. This was the ceremony of beating away the evil spirit which infested the body of an old cacique lying ill inside. Before we reached the place the door was closed, and those going in or out were careful not to open it any wider than was absolutely necessary. The crowd, gathered in front of it, looked at us in a sullen and forbidding manner. To our friend's interpellations they answered in monosyllables, and either did not, or affected not to, understand the Spanish language. At last a man came out of the hut dressed in the garb of a Huaso, or Spanish cattle-herd, who spoke the language fluently, and told us that, by birth an Indian, he had been made prisoner by the Spaniards, had learned the language in captivity, and was now acting as interpreter between the cacique and the authorities. He explained to us that we could not enter the hut, as that was against the prejudices of the people, who would not tolerate either Spaniards or dogs in the room with a sick person; that the cacique had been ill for weeks, and had not eaten anything for eight days, and that the Machi, or wise woman, was then in the hut trying to drive away the evil spirit. In effect, we soon heard the most dismal wails and shrieks proceeding from within, which lasted about half an hour. After this,

a silence followed, during which, as the interpreter told us, some old women were sucking the cacique's chest to give him relief. Then suddenly the door opened, and the Machi, a young and comely woman, dressed in her blue cloak, and wearing all the ornaments usual among wealthy Indians, came out holding a branch of the *canelo* tree, which she threw on a fire near the hut; and while the branch was burning, she pronounced some words, and a circle was formed round her and the fire. When the branch was quite consumed she gathered up the ashes and retreated again into the hut.

The *canelo* is the sacred tree of the Indian. It contains some principle of great medicinal virtue against fever; and a decoction of *canelo* leaves, or a draught compounded of its ashes, is an effectual remedy in many cases of illness. The tree is called "Boighe," by the Indians, and is a white cinnamon, or more correctly speaking, a drymis. It is greatly used by the Indians and the natives generally for medicinal purposes. The Machis revere it, and invoke the gods from under its branches for the recovery of their patients. It is even recorded that to oppose the malignant spirit a Machi will, in a moment of exaltation, climb up into the tree and throw herself down at the risk of limb and life. It is indigenous to the south of Chili, and grows, in protected spots, to a considerable height. Nearer the sea-shore or in exposed places it attains the dimensions of a shrub only.

Before and during the administration of the *canelo* draught the Machi pronounced a series of short sentences in a loud clear voice, between each of which the crowd of women howled and beat a drum or tabor. Then followed songs in low mournful tones, accompanied by a monotonous but gentle beat on the tabor, and eventually all became silent. The cacique, tired with the performance, or soothed by the canelo, had dropped off to sleep. Expressing our best wishes for his recovery we then left him to his fate.

The Machi has other functions besides that of medicine woman. She is the diviner and oracle of the tribe. When any one dies they hold a superstition that it must be through the influence or evil eye of some one, and appeal to the Machi to discover the person. If she names any one, that person is doomed to death at the hands of the surviving relatives of the departed, and thus many innocent persons meet a premature and bloody end.

However, although superstitious and wild, these people are not so barbarous as might be supposed. They are cultivators of the soil; have for ages known the use of metals, and turned the wool of their sheep to good account in making cloth. The art of tilling must have been known to them for many years, for, at the present time, ridges, such as can only be explained by the supposition that the land was once cultivated, are found in the younger forests, where trees a century old are growing.

They are courteous and gentle as a rule, and only become fierce and warlike in defence of their homes and the land of their birth. They cannot be called Nomad, although, when they find the ground on which they have settled will not bear satisfactory crops, they move off to fresh land, though at no great distance from their old settlement. They show obedience to their chiefs, and to the unwritten laws of their tribes. In war time they paint their faces with a red colour and fight naked, on horseback, with lances about forty feet long, and pointed with iron. They do not quite throw their weapons, but, holding them in the middle, hurl them at their foes at a distance of ten feet, catching them at the butt end. Although horses are not indigenous to the country, and were unknown before the time of the Spaniards, they have become very common among the Araucanians, who ride barebacked, or at most with one or two lambs' skins fastened over the horse's back with the stirrup band. The stirrup is very small, and the rider only places his big toe in it.

The Indian horse is almost more intelligent and domesticated than the Chileno, but he is terribly lazy. It is said that an Indian horse will never do anything else but jog along the road at his own pace, and is quite unfit for any work except carrying a rider on his back, but he knows and loves his master, and follows him like a dog.

The Araucanians have many traits of character which are interesting and worthy of respect. The poet Ercilla, who described them so well, did not exaggerate.

The men are brave and the women chaste, and they have among themselves a code of rough but punctilious honour. When the Spaniards first invaded their territory they were received hospitably, and in a spirit of frank welcome. It was only when the intention of the strangers to conquer and seize upon their homes was discovered that the natives showed the fierce resistance which to this day has baffled the Europeans. But even now in their dealings they are fair and just.

A trader in one of the border towns informed me that when he first settled there he could trust an Indian much more implicitly than a Spaniard. If an Indian happened to owe a few dollars he never tried to evade payment, but struggled to discharge his debt; and, in the event of his death before being able to do so, he left the payment of the debt as a legacy of honour to his family, who invariably looked on it as a sacred duty to be fulfilled. At the present time, in the land under their jurisdiction, or near their headquarters at Villa Rica, if a cacique once holds out the hand of friendship to a stranger, the latter may travel among the tribe or clans with comparative security. Nothing will happen to him as long as he comports himself quietly, and the fire-water is kept out of the way. He will be passed on from cacique to caciq ue, each one receiving him as

the friend of his introducer, and giving him hospitality. The fire-water is rather dangerous, as the Indians cannot resist it, and drink it, when they obtain it, till they get mad or helpless. There is an anecdote to the point recorded about the loss of a ship named the *Joven Daniel*, on the coast of Araucania, in 1849. The vessel became a complete wreck, and only a few of the passengers and crew were saved. They found a settlement of Indians not far from the shore, and were in terror of their lives. But the cacique received them civilly, and offered them his protection. In return they assisted to save as much of the wreck as possible, and handed it over to him. Unfortunately for the unhappy travellers, a cask of rum happened to be among the wreckage saved. The Indians soon discovered this, forthwith broached the cask, and drank till it was empty. Then evil thoughts entered their minds, and, after holding a council, they conceived the diabolical project of murdering the hapless Spaniards who had thrown themselves on their mercy. The murderous design was executed, and every one of the strangers put to death. It was supposed at the time, and believed for many years, that one young lady named Eliza Bravo, a passenger on board the lost ship, had been spared to become the wife of the cacique; but all the inquiries made among the Indians failed to trace her existence, or to find any clue to her fate, beyond the probability that she succumbed with

the others on the ill-fated night of the drunken slaughter.

The Indians are not quite dependent on foreign spirits for alcoholic beverage. They make their own cider from the wild apple-tree, which grows abundantly in Araucania; and, besides this, they produce an intoxicating liquor by chewing maize and then letting it ferment. A whole family will sit in a circle masticating maize, and throwing it into a wooden pail before them. In time this turns into a very intoxicating fluid. The luxury of getting drunk is by no means confined to the men. Women, and even children, are sometimes seen under the influence of alcohol on days of public or private rejoicing, and then they all become noisy, quarrelsome, and even dangerous. When sober, the Indian is a pleasant individual; he is discursive, imaginative, and superstitious. When he has a palaver with a friendly trader in a settlement, he always begins by giving an account of himself from the time of his waking up to the moment of his interview. He details his waking, rising, all his thoughts, the incidents of his journey, and in fact spins out a rather tediously long yarn before he comes to the point of his speech.

When on a journey the Indian is very superstitious. There is one little bird, an inhabitant of the forests, called the "*chuca*," which is to him a bird of omen. If he hears its chirp on the right side

of the way he continues rejoicing; but if on the left side he takes it as a foreboding of evil, and returns at once. The men carry their superstitions even to their games. One of their favourite amusements is a game called "*Palican*," a kind of hurling on a large scale. According to the rules of the game one party holds the ball, generally within the bounds of a village, against the other, who endeavour to keep it within the bounds, and it is usual for the players to encamp on the ground the night before the play begins, and to invoke the gods lest the evil spirit should come within the bounds and spoil the sport.

Most of the Indians I came in contact with near Ercilla, while preserving all the manners and customs of their people, are not quite independent. They have accepted the authority of the Chilian Government, and hold their land on exactly the same terms as any other inhabitant. They are rather troublesome citizens, and having been subdued by force, they need the presence of armed force in the forts to keep them in order.

The Indians who do not acknowledge the supremacy of the Chilian authority remain within the limits already described, and are termed "Indios Bravos" by the Spaniards. The number of them is variously stated from 50,000 to 70,000. It might, perhaps, be possible for the Spaniards to exterminate them by an organized campaign; but the acquisition of their territory, without a population, would not be of

much value to Chili at present. The policy pursued, therefore, is that of keeping them within certain limits, guarding the boundaries, and trusting to gradual absorption among the surrounding population, or decimation through disease.

From careful observations it is known that the number of these people is yearly diminishing. This is attributed to two causes, one being the introduction among them of diseases, such as small-pox and others; also the evil habit of drinking to excess since their contact with the Spaniards: the other, their own superstitious custom of consulting the Machi as to the cause of death. It is lamentable but true that any natural death among them is followed by the murder of one or more persons.

It is asserted that the lower class in Chili are almost entirely of Indian origin. Their appearance and habits, together with the fact that the introduction of labourers from Europe has not been at any time very considerable, seem to justify this statement. But the tribes that have become civilized inhabit the regions north of the Biobio, and were much less wild than the Araucanians. In the districts of Angol, Cañete, and Lebu, and the south generally, the process of absorption has taken place but very slowly, and few aborigines have advanced in civilization. In former years the purchase of land belonging to Indians was forbidden by law, in the hope of creating with time a civilized

population of aborigines. But this arrangement did not prove successful, and resulted in wide tracts of land being left uncultivated in the hands of a listless and sparse population. Now, the Indians may sell their property, and many avail themselves of the option, and then retire to the land of the caciques, or settle down on some small plot of ground with the proceeds of their sale, or what may remain of it. The settlers in the vicinity of the border towns are not proof against the luxuries of civilization, and the young men frequently take to working in the fields for the Spaniards in order to earn a few dollars. When brought in contact with other labourers they soon learn the Spanish language, and frequently adopt the European dress, marry, or cohabit with the Chilena girls, and thus become assimilated to the rest of the population. The Indians, however, who congregate in tribes, and live according to their ancient customs and under the rule of the caciques, are, and will probably remain, inimical to the Spanish or Chilian rule. They still welcome the news of the difficulties of the Government as an opportunity for them to strike a blow, and increase their power. The absence of troops in the forts round Angol during the war, was a tempting occasion for a rising, and this, to some extent, did take place very shortly after my visit to the district in December, 1879. The attack was not a general one, but small parties of Indians put on the war paint, and hovered round Angol and the *haciendas*, murdering

isolated wayfarers, committing outrages, burning houses, and stealing cattle. Many of these bands were simply gangs of ruffians bent on plunder, and probably led by Chilian desperadoes, or escaped convicts; but, at the same time, it is certain that others were prompted by that warlike and resentful feeling which still exists among them, ready to break out at any time under provocation. The late excesses, so far as I could ascertain, have not been very serious, and have been confined to the neighbourhood of Angol, but still a good many lives have been sacrificed, and a considerable quantity of property destroyed. It may be surmised that, when the Government are able again to send troops to the south, the perpetrators of these outrages will be severely called to account.

The management of these untameable and irreconcilable people is one of the difficulties of the Chilian Government. Something must be done to bring them into subjection, and the due observance of the laws of the country. If this cannot be done (and it is very improbable that any scheme to that end will ever be devised), they must follow the fate of all irreclaimable tribes, and be wiped away from the earth like so much worthless brushwood. It seems a harsh fate for a people with so many fine natural qualities, and it appears unjust to jostle the old occupiers of the soil out of their holdings and out of existence. But, if their rights had been respected, and they had been allowed

the full possession of the immense territory they once inhabited, the great natural wealth of South America would have been kept closed to the world, and we should have known neither bark, quinine, guano, nor Chili saltpetre, and the vast country would have been left to a few irresponsible savages, feeding on the potato and bean indigenous to the soil.

When a government has to cope with a large disaffected population it must sooner or later come to the crucial contest for supremacy, and the weaker of the two parties must submit, or be exterminated. It is sad that the Araucanians are apparently incapable of civilization, for they are intelligent and honourable. When taken care of in youth they are amenable to good treatment, and even may become domesticated, as I saw exemplified during my sojourn at the Ercilla hacienda, where a little Indian boy, called Emmanuel Buonaparte, was employed as servant. He was a chubby-faced, bright-eyed lad of twelve years of age, small for his age, but with broad shoulders and a strong frame, who had been educated by the monks of Collipulli, and spoke Spanish fluently. He was studious, active, had a friendly smile while doing his work, was an excellent little servant, and waited at table and made himself generally useful. A favourite in the family, he expressed for them great attachment, and evinced no desire to return to the wild life of his own people. When angered, however, the spirit of his race asserted

itself, and on one occasion he actually attacked a man who had teased him, with a knife. Otherwise he was a good little boy, with a pardonable taste for potatoes, which he consumed in large quantities. Such cases I believe to be very rare, but yet a certain number are yearly on record, and thus some assimilation of the races takes place. But whatever may happen in the immediate future, it is not difficult to foresee that a time must come when the stronger race will assert itself over the entire territory inhabited by Indians, when the Araucanian will be a creature of the past, and his descendants will be only recognized by some peculiarity of features among the inhabitants of Southern Chili.

CHAPTER VI.

Rides about Ercilla—A Fox Hunt—Return to Angol—Ride over the Cordillera—A New Hacienda—A Dark Ride—Cañete—Historical Anecdotes—Valdivia's Death—Farming at Cañete.

We had some very pleasant rides during our stay at Ercilla, besides our visits to the Indians. On one occasion, during a ride across the pampa with the dogs, we started a fox and had a run. It was a little silver fox, which had no chance with the hounds of the pack, and after a short burst the brush was secured. The forests on the slopes of the Andes abound in "Pumas," also called Chili lions, and on the heights the *Guanaco* is to be found. But the wide plain, stretching from the foot of the great mountain range to the smaller Cordillera of the coast, does not appear to abound in game of any description.

On another day we had a long ride through the forests which line the base of the Andes, and visited an outlying stock-farm. Here we saw cattle of all kinds, and many horses wandering about the forest apparently in a wild condition. Some of the horses were very handsome, though small, and the cattle seemed in good condition. This was the last farm in the district,

and extended into the virgin forest of the Andes. The process of clearing the land had already commenced, and we rode over acres of ground where the trees had either been burnt down, or their remains were standing in the shape of melancholy charred stumps or blackened poles. It seems a pity to destroy such splendid trees, but timber has no value in such a place, and the soil it grows on will yield a good return, if sown with wheat. The land on the great plain is rendered more valuable by the number of streams which here descend from the Cordillera, and spread their fertilizing waters over the country. Some of these streams, or small rivers, run through prettily wooded glens, and often form small waterfalls, by washing away the soft ground of the alluvial surface. We had the pleasure of a picnic in one of these glens, close to a waterfall, under the shade of the forest trees garlanded with creepers and graceful parasitical plants. The forest growth was so thick that our retreat was cool and fresh, although the midsummer sun was high in the heavens. This was our last entertainment among the attractive wilds of Araucania, for that afternoon we rode away to Angol, accompanied by our escort, and the good wishes of our kind host and hostess, whose hospitality we had so thoroughly enjoyed during our visit.

On our return ride to Angol we took a much shorter road across country, leaving the village of

Collipulli and some of the forts on our left, and coming into the valley of the Malleco at the fourth fort. We reached Angol in the evening, long after the sun had gone down behind the Cordillera, and had but little time left to make preparations for an intended ride across the "Cordillera de la Nehuelbuta" the next day. Our intention was to take a road leading over the highest part of the range where the "Pehuen" or "Araucania imbricata" is indigenous—in fact, the only spot where this magnificent pine-tree grows wild. It springs here to a height of a hundred feet, and bears a fruit containing a farinaceous substance greatly appreciated by the aborigines, one tribe being denominated the "Pehuenches" from their inhabiting the region where this tree grows.

We proposed, weather permitting, to halt for the night beneath the branches of these forest giants, and accordingly provided ourselves with all the immediate necessities for a short encampment. We had, again, a difficulty in procuring horses, which was solved by our companion purchasing three small and hungry-looking steeds, which, however, proved willing on the road and capable of great endurance. Our start was delayed by various causes, and it was not till seven o'clock in the morniny that we were fairly in the saddle, and rode off with sundry warnings from local wiseacres as to the probability of bad weather. The appearance of the sky was certainly not reassuring. It was cloudy, and

a wet-looking mist hung about the hills. Nevertheless, we departed in the hope that the coming heat of the sun would absorb the mist, and that the southern breeze would dispel the clouds. We commenced our journey by riding up a steep bridle-path, winding up in very sharp curves to a considerable height. At first our track lay over bare ground, then for some distance among stunted and scrubby trees, probably exposed to the destructive presence of goats; but, eventually, we fairly got into the forest at an altitude of about a thousand feet, and nothing could be more charming. The forests of Southern Chili have a beauty peculiar to themselves, greatly owing to the exquisite colouring and variety of the foliage, which ranges from a most delicate light green to a dark olive colour. The trees are stately and attain a great height, and are covered with creepers and parasites, growing like festoons among them. One parasitic plant in especial added to the sylvan beauty of the scene. It was of a bright yellow colour, and hung in fantastic shapes like curtains of lace from bough to bough, or tree to tree. It is sometimes appropriately called "Angel's hair," and, from a distance, might to a vivid imagination be mistaken for the golden tresses of some mystic being. Besides these beautiful creepers there is a rich undergrowth of giant ferns and canes. The latter at times grow so high that the tops in bending form a natural vaulted roof over the pathway; but when they are

broken they become a serious impediment to the traveller's progress.

These forests are silent. There are few birds; the one mostly heard being the "chuca" or Indian presage bird, sometimes cheering the traveller with a merry note to the right, at others warning him of danger on his left. We had not much time to admire the forest in comfort, for it soon began to drizzle, and eventually our hopes of clear weather were disappointed; for the drizzle turned into rain, a steady, cold and wetting rain, with no prospect of cessation. The mountain path soon became a slippery track, on which our little horses crawled with great difficulty. To mend matters our guide lost his way, and we had to ride to and fro for hours under the dripping branches, and through the high wet grass, with the dismal prospect of having to spend the remainder of the day in idle search for the road, and possibly pass the night under a cheerless downpour of water. Fortunately we came on a family of wood-cutters, who had, for their only shelter, a small hut made of logs of wood, forming a frail roof, under which they were cowering round an uncommonly smoky fire. These people directed us to a new *hacienda* or farm recently built, where we might possibly find refuge, or, at least, obtain directions for regaining the right road. We turned our steps towards the place, which we reached, very fortunately, before darkness set in. The building was not

yet completed, and was neither wind nor water-tight; but we were thankful to get under its shelter from the cold heavy rain and biting wind. We found an amiable person in charge of the place as housekeeper, who, in the absence of the owner, placed at our disposal the meagre comforts of an incomplete establishment, and we were soon sitting round a pan of charcoal in one of the rooms, over which we tried to warm our numbed limbs. Another pan of burning charcoal, over which was placed a huge wicker globe, served to dry our dripping clothes. The pan of smouldering charcoal is the usual and, in many parts of Chili, the only method adopted to guard against cold.

In winter, the household crowd round one of these pans toasting their feet, while their backs are freezing in the cold draughts of doors or windows left open to clear the room of the noxious vapours of the burning charcoal. We were soon regaled with a warm *cazuela*, a welcome feast to hungry travellers; more welcome than the cold chicken and jerked beef we had provided for our expected encampment under the shade of the mighty pine-trees.

The rain continued to pour down mercilessly and continuously, and during the night the wind rose among the heights, and swept down the narrow valley in which the hacienda was situated, whistling through the rough, unfinished adobe walls, and shaking the frail structure like an earthquake. We heard the wind

VIEW OF A NEW FARM.

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with satisfaction, in the hope that it would drive away the greater evil, rain. At four in the morning, just as the light of day was struggling through the grey clouds, we saddled our horses and prepared for the continuation of our journey. We found our path, leading upwards, slippery, and difficult for the horses; moreover, every tree and bush was wet, and, although it was not raining at the time, we rode under a continuous shower as the breeze shook the branches. Later in the day the wind ceased, and the rain commenced again, so that we had to continue our ride over the forest-covered Cordillera under the most unfavourable circumstances. About midday we reached the region of the pines, and the summit of the range at this point. Fortunately the rain had abated somewhat, and, between occasional showers, we were able to admire the stateliness of these princes of the forest, rising up for a hundred feet above their roots, a height which must represent a considerable age, for these pines grow slowly. They stand apart, yet their branches form almost a roof under which sweet herbage covers the ground, and is a favourite pasture for cattle, herds of which were browsing around us. The ignorant shepherds burn the grand old pines to encourage the growth of the grass, and we saw numbers of trunks lying half charred on the ground, and some still standing, though blackened and lifeless.

We could have remained for hours in this romantic spot, admiring the trees and the view we obtained of

the wood-covered slopes, but the weather was not propitious for camping, so we pushed on without much delay. We had reached the altitude of four thousand feet, and had a long and tedious descent before us. We found the path more slippery and difficult than ever, as the rain had turned the soft mud of the ground into a treacherous mire, so much so that our horses fairly sank on their haunches often, and slid down for yards at a time. Our progress was unavoidably very slow, and we had to congratulate ourselves at reaching the foot of the Cordillera just before nightfall, and with no worse accident to record than one or two falls. When we reached the level road of the valley, we found ourselves fifteen miles from the little town of Cañete, our destination, and we had the choice of two evils—either to sleep uncomfortably in some rough farm-house, or ride on to the town in the dark. We selected the latter. By good luck we found a guide to pilot us along the unknown road. The last fifteen miles took four hours to accomplish, and was a most unwelcome end to a long and fatiguing journey on horseback. Without encountering any accident we slowly covered the distance, plunging through lakes of mud caused by the rain, and fording flooded streams, which in the darkness seemed like mighty rivers. One pool of deep, stagnant water we had to cross on a plank, on foot, by the faint glimmer of a flickering candle shaded in a hat, our horses meanwhile swimming over. It was mid-

night when we rode, or rather crawled up, to the door of the small inn of Cañete. Rough as the hostelry was, it was a welcome home for weary travellers after a sixteen hours' ride through rain, and the fare of cold meat and Valdivia beer, though not luxurious, was very acceptable. The next day we sauntered about the little town of Cañete, quite recently built on the site of the old city founded by the Spaniards, in 1557, near the spot where Pedro de Valdivia was killed.

Cañete, like all the towns founded by the Spaniards, was placed in an admirable strategical position. The old fort was so situated as to be surrounded on three sides by a ravine, which formed a natural moat and bastion against any attacking force. The open side which had to be defended, was protected by a deep ditch, and commanded a full view of the plain of Cañete, extending southward for many miles. When the Indians took Cañete, in 1560, they destroyed the town and the fort, and no building has stood on the ground since then until 1862, when the new town was founded to meet the growing wants of the newly-settled farmers on the surrounding plain. Traces of the old fort are still visible, though the walls are now mere ridges covered with grass, and the moat a shallow rill.

The old fort of Cañete recalls to mind some of the tragic incidents of the early conquest of Chili by the Spaniards. Near this spot the great Captain, Valdivia, lost his life, and the country round has been the scene of numerous

bloody engagements between the invaders and the indomitable Araucanians. Soon after Valdivia had invaded Araucania, and imagined he had subdued the Indians, namely, in 1553, a general rising of the natives took place in the south, several of the small forts were taken, and those of Lebu and Tucapel threatened. Under these circumstances Valdivia, with a small force, left Conception and marched to the south to reconquer the forts and punish the insurgents. A battle was fought on the plain of Cañete, which ended to the advantage of the Spaniards, but the victory was not decisive, for the natives only retreated to their camp. It so happened that a young Indian slave, or servant, named Lautaro, who had been for some years in the service of Valdivia, and who, although civilized by contact with the Spaniards, still retained a natural love for his own people, feeling deeply distressed at the sight of their defeat, and knowing the weakness of Valdivia's force, deserted at night, and so inspired his fellow-countrymen that they, taking courage at his words, renewed the combat next day, and, under the leadership of the cacique Caupolicau, defeated the Spaniards, and took Valdivia prisoner. His life was spared, but he was carried away to the central camp of the Indians, there to be tried, and dealt with according to the decision of a council of war. The leading caciques were for mercy, and his life was almost granted, when an old cacique, more bloodthirsty than the others, reproached them

for allowing the arch-enemy of their race to escape, and felled him with his club. This was sufficient to arouse the uncertain temper of the crowd, and he was assailed by numbers and soon dispatched. According to legends, his body was torn to pieces and divided among the Indians, who ate the flesh and used his bones to make a sort of pipe, or flute, common among them.

This story is not authenticated or credible, for the Araucanians never had been detected in cannibalism. Neither is another story at all probable, to the effect that they poured molten gold down his throat exclaiming, "Gorge thyself, tyrant, with the metal of thy lust, and for which thou hast committed so many crimes." Doubtless, some incident during the council roused the fierce instincts of the savage warriors, and they killed him under the influence of a sudden impulse.

Such was the end of Valdivia, the first and the most successful conqueror of the Araucanians. He penetrated further into the country than any one has done since, as even at the present time the town of Villa Rica, which he founded, is in the hands of the Araucanians, and has been so since 1602. It seems marvellous that this valiant captain should, with comparatively few men, have achieved victories which his successors, with greater command of force and knowledge, were not able to repeat. I am inclined to hazard the opinion that the horses of the Spanish

soldiers had much to do with their early success. The naked Indians had never seen these animals, and were frightened at the monstrosity of the enemy opposed to them, who could overtake them on four legs, and then "divide himself" when necessary to butcher or pilfer. Moreover, they fought then as they do now, naked, and armed with spears. These javelins were formidable weapons against naked men, but were of no avail against warriors covered with steel. In time, however, the Indians grew accustomed to the horses, became possessors of some themselves, learnt to ride and use them in warfare with as much skill and daring as their opponents. I opine also that the Spaniards, in time, became somewhat enervated; and that the children of the new soil were not as hardy and pugnacious as the early adventurers, who came in search of gold and loot at the cost of so much blood and destruction.

But to return to modern Cañete, which has become the centre of a considerable trade in grain and flour. Two corn-mills are kept at constant work, and the flour is carted to Lebu across country, to be exported thence. A distillery is also in operation, producing rough spirits, which the Indians drink in large quantities, to their great disadvantage. Cañete will, no doubt, in time become a thriving place, when the country around becomes more thickly populated. At present the farms are in their infancy, and before

the land can be tilled, many acres of brushwood will have to be cleared away. The little town presents the usual appearance of Chilian towns, with broad, straight rectangular streets, converging in the square or "*Plaza*," with its wooden platform in the centre, and little patches of neglected flower-beds all round. The shops are mainly general stores, containing the simple necessaries of the Chilian *peon* or Araucanian Indian, and usually with facilitles for pawnbroking and dram-dealing. The settlers and traders are mostly foreigners, either Germans or French. The Germans are numerous in the south of Chili, and are keen traders. At Cañete German is spoken almost as much as Spanish.

The Germans seem to retain their nationality longer than other foreigners, and to the third generation the Teutonic settler may be recognized by his features. The children of immigrants born in the country, although they speak Spanish fluently, do so with a foreign accent; but they are masters of the language of their parents. A great deal of the land in the neighbourhood of Cañete shows signs of having been cultivated at some previous epoch, and, although covered with forest, parallel ridges may be traced, which are scarcely explicable except by assuming that the ground had been tilled before the trees grew. This subject has not been very fully studied, but there is every reason for assuming that the country

was at one time more thickly inhabited than at present. It is quite certain that, since the invasion of the Spaniards, the number of Araucanians has greatly diminished; and it is also certain that those who inhabited this part of the country have, in the course of years, retreated before the encroaching wave of civilization, and settled on the land round Villa Rica, where they still hold their own. There are still some Indian settlers round Cañete, and they may be seen in the town standing about the dram-shops, just as at Collipulli and Angol, though not in such numbers. They live on small plots of land which they own, and work as labourers on the new farms recently purchased by foreigners. We had a great desire to inspect one of these "recoveries" of land, and availed ourselves of a kind invitation to spend a few days at a *hacienda*, about thirty miles from Cañete, which had very recently been established on land purchased from the Indians, and is situated at the extremity of the reclaimed part of the plain.

CHAPTER VII.

Visit to a New Farm—A Rodeo—Scanty Population—Agriculture in the South of Chili—A Racecourse—The Plain of Cañete—Journey to Libu—Valparaiso—Santiago.

Our host was good enough to come up to the town with horses to take us to his farm, and in his company we proceeded on our ride over the rich plain of Cañete. This would have been very enjoyable had the weather not been so unpropitious; but it rained incessantly, and the rivers on the way were all swollen and almost impassable. We passed through a country only partly cultivated, and as we neared our destination the ground became more rough, and covered with brushwood and high coarse grass. Here and there we passed small lakes or lagunes, the banks of which were prettily wooded, and alive with numbers of wild swan, duck, and other water-fowl.

We found the habitation of the farmer to consist of a primitive log-hut, roughly put together, and containing two rooms with openings, closed by wooden shutters, in lieu of windows, and neither plaster nor paper used to fill up, or cover the chinks in the walls and roof. After a long and wet ride our supper of "*charqui*" and

"*valdiviano*" was very welcome. *Charqui* is simply jerked or sun-dried beef, and is the general, and I may add the favourite food of the Chileno *huaso* or cattle herd. It is very useful on long journeys, as it is easily carried. On the march it is eaten without further preparation, but when possible it is, after being cut into small pieces, boiled with onions and potatoes, and made into soup called "*valdiviano.*" In this form it is very tasty and invigorating.

Our repast was washed down with a plentiful supply of good Conception wine, and several bowls of *mattê*. This latter beverage is peculiar to South America, and more so to the eastern than the western slope of the Andes. It is a decoction of the leaves of a plant called "*yerba,*" which grows in great abundance in Paraguay. The *mattê* tea is put into a bowl, which in the richer houses is made of silver, and some sugar, and boiling water is poured over it. It is then sucked up through a silver, or other metal, tube having a perforated bowl at the end. The neophyte is in great danger of burning his mouth by drawing too soon, but he quickly finds it a most refreshing beverage. When we retired to rest our host advised us to take his favourite little terrier to our room on account of the rats, which he said might otherwise trouble our repose. It is impossible to say what the rats would have done had we been without the dog, but the experience of the night was that of an incessant rat hunt.

Under and over the beds, and all round the room, the chase continued until the light of day began to pierce through the numerous chinks of the timber walls and roof. On subsequent nights we contented ourselves with the society of the rats alone, giving them free option to perambulate the room, while we slept soundly beneath our ponchos.

Our rides over this district were very enjoyable, owing to the great diversity in the character of the country. On the mountain range we had the advantage of long shady rides under the fine old trees; while, at the foot of the hilly ground waving fields of ripening corn extended all around and along the seashore, and we rode over sands and downs covered with short grass. Close to the shore were patches of low wood, with here and there a lake or lagoon so prettily bordered with shrubs and flowers that the view more resembled that of a carefully tended park, than an almost untrodden wilderness. In places where the plough had already passed, the beauty of the wilderness was replaced by the tamer, but still charming effects of cultivation. The swamps were drained, the brushwood removed, cattle were browsing on the rich herbage, and, where forests quite recently stood, fields of waving corn now gladdened the eye of the cultivator. The process of revolutionizing the aspect of nature is in full operation in Southern Chili, and the land where now the silver fox trots out in broad daylight, jaunty

and fearless, where flocks of wild swan and ducks are at home, like farm-yard poultry, and the green parrots are screeching among the woods, will soon be cleared and cut into fields. The denizens of the wilderness will move away to more secluded haunts, and the land they occupy will be turned into pastures where cattle will browse to fatness.

It takes two years to clear the unbroken ground, after which the land, without any preparation, will bear a crop of wheat for three years in succession. It is then generally allowed to remain fallow for one or two years. During this time the roots of the old trees spring up into life, and the ground becomes covered with low brushwood, which in its turn is burnt to fertilize the land afresh. This process is an exhaustive one, and cannot go on for many years. Hitherto, no other crop but wheat has been raised in quantity, although almost anything will grow on the rich soil and under the genial climate. Wheat is, however, the best crop for the farmer here, as he finds a ready sale for it for export. On the farm we visited it was the only crop grown by the owners, but on the land they allotted to their labourers, beans, potatoes, peas, Indian corn, and every kind of vegetable are produced in smaller or larger quantities. All these plants grow in a most luxuriant manner, and the wheat rises to a height of five or six feet.

The valley of Cañete extends from that town towards

the south as far as Tirhua Point, a distance of about fifty miles, and its width from the slopes of the "Cordillera de la Nahuelhuta" to the sea-coast—which is about sixty miles at Cañete—comes to a point at Tirhua, where the mountain range runs into the sea. The best wheat-growing land is on the slopes of the Cordillera, and at the foot of the hills. The plain near the sea is rather marshy, and better suited for stock-farming. The farm of our host comprised land of both qualities; and while the higher parts were being cleared and brought under cultivation, the lower plain was stocked with cattle, horses, and a number of mares bred and kept for threshing during the autumn. The system of threshing the corn in Chili consists in forming a circle of 100 to 200 yards diameter, on which the ripe corn is thrown, and over which a number of mares are made to gallop. As the corn becomes threshed the straw is piled up in the centre, and the corn gathered up and stored. The mares are urged on by men on horseback who gallop behind the troop, and are exposed to great danger, for a fall in the circle means death, or at least severe injury. Nevertheless, it is a favourite performance of the daring Chili *huaso*, who delights in equestrian feats. The cattle on the stock-farms run almost wild, and during the year certain losses through accidents, natural deaths, or theft, are inevitable.

In order to keep count of the animals on the farm,

they are driven in to an enclosure once, or several times, during the year, and there counted, sorted, and marked. This is called a *rodeo*, and is looked on as a festival by the farm-labourers and the surrounding inhabitants. Whenever a *rodeo* is held at a farm, men come from miles around on horseback to assist in driving the cattle in—an occupation not quite devoid of danger, as some of the animals are wild and savage, or what the Chilians call "*brav*." When a beast refuses to enter the enclosure, or in case it has to be separated for sale or fattening, it is caught with the lasso, in the throwing of which the Chileno is an expert. He will lasso a bull by the horns, or by one leg, or even by the tail. Sometimes it takes two lassos to secure a strong and very wild animal. The dogs of the *huaso* are trained to play an important part at a *rodeo*. They not only help to drive in the cattle, but, when they are lassoed, they lay hold of their tails and drag them down; sometimes they even spitefully worry the poor beasts and have to be driven off. But they are in so far useful that they exhaust the animal's power of resistance, and render it submissive. This accomplishment of the Chili dogs may be very useful at a *rodeo*, but their fashion of hanging on to the tails of animals is very unpleasant when exercised on the horse of the peaceful traveller. In riding through the country in Chili it is absolutely necessary to carry

either a whip with a long lash, or a thong at the end of the bridle, to scare away these dogs.

We had the pleasure of witnessing an impromptu *rodeo*, arranged by our host, in order to give us some idea of the reality; and although only a few hundred tame animals, then quietly browsing in the vicinity of the farmstead, were driven in, it quite enabled us to form a picture of the excitement and sport connected with the real thing. More than a score of men, mounted on eager little horses, were galloping about in every direction, yelling and shouting as loudly as their lungs would allow them, and whirling the lasso about in readiness to drop on any animal; the dogs meantime yelping and barking like hounds. We took our place near the entrance to the inclosure, and here also were stationed the best *huasos*, who, at the bidding of their employer, caught the animals as they passed, by legs, or horn, or tail, with never-failing certainty, throwing the lasso with remarkable ease, even at a considerable distance. In one case we assumed a quiet young bull to be an "*animal brav*," and had him caught by two lassos, one on each horn. The poor brute, thus suddenly stopped in his career, stumbled to the ground, where the dogs set at him, and nearly made him "*brav*" in earnest with fear and astonishment. In fact, the men, the dogs—nay, even the horses, entered so thoroughly into the spirit of the sport that they seemed to forget it was only a sham to satisfy the

curiosity of a few strangers. It was getting so very near the reality that the owner, fearing that all the cattle from the distant parts of the farm might be driven in, had to give the signal to stop. The best performance we witnessed was catching a bull by the tail. The *huaso* threw his lasso with a very wide noose over the head of the animal, and allowed its body to pass through, pulling the lasso up and tightening it just at the tail, and holding the roaring plunging brute fast.

At a large Chilian *hacienda* or farm every one, from the owner down to the lowest servant, is on horseback every day, and generally all day long. The farm-servants, more especially the huasos or cattle herds, live on horseback; and even when they get a holiday they spend it in the saddle, or what they are pleased to use as such, smoking cigarettes and drinking wine. I may here mention that the Chilian saddle, or "*montura*," as it is called in Spanish, consists of a wooden frame laid on the horse's back over a folded rug, or some sheepskins, and covered with a number of other skins, either lamb, sheep, deer, guanaco, or even llama. I have known as many as eighteen skins used on such a saddle. They are kept in position by a belt passing round the belly of the horse, and, when taken off, they form the bed and covering of the *huaso* at night. To those not accustomed to a *montura*, the position is as painful as performing the "splits" would be to an amateur acrobat. But the Chilian begins to

ride as soon as he can walk, and is used to the *montura* from his boyhood. As we left the scene of the *rodeo* we met a number of men riding up to the place. They had come from some distance, having heard of the chance of sport.

In more thickly inhabited parts of the country a *rodeo* is an extremely merry affair, as crowds come to the meet. But in the newly-populated regions comparatively few can be mustered. In fact, the question of a working population is a very serious one in new and distant-lying farms like the one I visited. The land is purchased either from the Government or from the original owners—a cacique and his tribe. It is bought cheap, and only requires to be cultivated to yield large profits. But there are no hands on the soil. The population is sparse, and the few Indians that remain on the ground are not of much use as workmen to reclaim and cultivate the soil. In order to attract settlers to such a district they are tempted with free houses, grants of small plots of land free of rent, as long as they remain and give their services when needed, and good pay for the time they are employed on the farm. But, even with such favourable terms, it is difficult to secure labour in new districts in Chili, and its development is much retarded in consequence. Emigration to Chili has not been great at any time from Europe, yet the south presents very fair prospects to the agriculturist, either as capitalist or labourer. Living is cheap

and good; the climate healthy and mild, the soil wonderfully productive; and, with attention and work, a careful man ought to prosper. Nevertheless, emigrants to South America do not, as a rule, remain in the country as settlers on the soil, but only spend a short space of time in the hope of acquiring a fortune.

Unfortunately, the royal road to wealth is not more easy to find in South America than elsewhere; many there are that seek, but few that find it. A new country like this, with so many advantages, presents a thoroughly good field for the industrious and sober man, who may be pressed at home by the competition resulting from over-population. Life on a *hacienda* in Chili has many attractions, such as good climate, beautiful scenery, plenty of game, and a free, camp-like existence. The Chilian landowner is, as a rule, a jovial, pleasant fellow, always glad to see a friend and give a welcome to a stranger. In the outlying districts the *haciendas* are the inns on the road, and the wayfarer rides up to the door of the house, and asks for hospitality with the certainty of a hearty welcome. This is, in fact, a custom arising from necessity in a country so sparsely inhabited. Of course every journey here is performed on horseback; the traveller must needs ask for shelter at the houses on his way, but the civility is in time returned, and the host of to-day becomes the guest of to-morrow.

I was surprised in the course of my rides over this farm at the quantity of game. Wild duck, wild swan, partridges, woodcock, snipe, and other game in abundance; besides foxes, wild cats, and, I was told, even Chili lions, as they are locally called. This part of the country is little explored by sportsmen, and would, I fancy, repay the trouble of a journey to one with time to spare, and having no insuperable objection to a long sea-voyage.

During our stay at the farm a race meeting was held on the neighbouring downs, and this we went to see. As with all nations fond of horses, racing is a popular amusement among the Chilians. Every one, from the landowner to the lowest peon, turns out to see it, and even the Indians come in numbers to witness the sport. When we rode up to the racecourse we found a large crowd assembled, and a regular street of booths erected for their entertainment and refreshment. The course was marked out along a straight, level piece of ground, about a mile long. Only two horses were started at a time, and these were mounted, bare-backed, by boy jockeys, who rode without shoes or stockings, but their bare feet were armed with huge spurs, attached by a bit of cord. They also carried whips, and flogged and spurred the horses from the start to the finish. The races were all very close, the two little horses running alongside each other, neck and neck, almost the whole way. When the race was decided the winner returned up the

course escorted by a numerous body of cavaliers in gay ponchos, cheering lustily, while the beaten competitor followed slowly in the rear with only his owner and a few silent friends to accompany him. The general aspect of the course was extremely gay. Hundreds of well-mounted men, with gaily-coloured ponchos floating in the air, were careering about at full gallop, performing all kinds of equestrian feats. After a race was over the general movement was towards the drinking bars. A bar in Chili is a bar in reality. As every one is on horseback, the itinerant wine vendor places a bar before his booth in the shape of a long, straight tree, fit to serve as the mast of a schooner, and up to this the thirsty rider brings his horse. When a crowd assembles before it a regular piece of horse-play ensues, every one trying to oust his neighbour; and the horses are so accustomed to the sport that they enter into the fun, and when they gain the bar stick their chests against it, and are not to be moved except by superior force. Occasionally a daring rider, mounted on a good horse, will make a tilt at the end of the barrier and pass clean along it, disturbing every guest. Of course there is great shoving and turning round, and squeezing, but seldom, if ever, loss of temper. This is considered part of the amusements at a race, or, indeed, at any public meeting in the country. The conduct of the horses is most remarkable; although they struggle and do their best to bring their

riders to the front, I never saw one of them kick or bite, which indeed would add greatly to the danger of the riders. Frequently, however, accidents happen, legs get jammed, bruised, and sometimes broken, but seldom any more serious injury. At first the sight of the struggling horsemen gives the impression of a free fight on horseback, and it takes some time to realize this to be a variety of pleasure in Chili.

Besides the drinking bars with the rough fun, there are booths where rather greasy *pucheros* and *cazuelas* can be obtained, and others devoted to dancing. In the latter several women are singing somewhat melancholy ditties, accompanied by a monotonous strumming on the guitar, and one or more couples are revelling in the performance of the national dance, called a "*cuaca*," which consists in more or less graceful movements of the dancers, stepping opposite to each other as in the Highland reel or Hungarian chardas, with the additional peculiarity of waving a handkerchief in the air. This waving is the distinctive feature of the dance, and the pretty young girls give it quite a coquettish air. It seemed to me as if the dance was interminable, for I returned to look at one couple, at intervals, during three hours, and still found them slowly treading the rough deal planks of the booth to the sound of the guitar, the melancholy voice of an old woman, and the clapping of hands by the spectators by way of accompaniment. There were a good many Indians on

the ground, but they kept quite aloof, and sat in groups as silent spectators of the scene. One family of a cacique had hired a booth to themselves, and were evidently having "a good time of it," with the aid of a cask of cider, or *chacoli*, or something stronger.

This cacique seemed to have a large family, as there were several wives, duly decorated with silver ornaments, sitting in front, and a goodly number of young girls modestly cowering behind them. The cacique, an elderly, fine-looking man, sat discoursing with the men who came and went, occasionally taking a draught out of a horn, but never smiling. Many other less imposing groups were scattered over the ground, and, as evening advanced some of them exhibited the effects of the jovial potations of the day. The Indians were, however, not the only spectators who exceeded the strict limit of temperance, and, in fact, the closing scene was rather disorderly. On our way home we witnessed a number of Indian women, some with babies in their arms, getting across a river. They had among them but one miserable, small white pony, on which an old woman with a scarlet poncho sat with legs astride. She took every woman across the stream, sitting behind her, and came back each time, after depositing her burden, to fetch another until they were all over, and then she rode off at the head of the party. The men waded through the water, which was about five feet deep, and received their wives quite gallantly on the other side.

A CACIQUE.

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These people are full of kindness for each other; they may be uncivilized, but they are scarcely barbarians.

Our stay at this *hacienda* came to a close with a long and pleasant ride to a lake, near to Cañete. This is a magnificent sheet of water, surrounded with stately trees and flower-covered banks. The scenery round part of this lake was more like that of a cultivated park than the border-land of a primæval forest extending for miles. There are several large sheets of water on the great plain of Cañete, at some height above the level of the sea. It may be that, some day, they will serve as reservoirs for a system of canals to carry the produce of the rich farms to the centres of consumption, or to the seaports for exportation.

From Cañete we rode to Lebu, our old quarters, in order again to embark in a steamer for Valparaiso, and thence to travel to Santiago by railway.

The road from Cañete to Lebu is tolerably good, considering the traffic; it runs over a gently undulating country, and through park-like scenery, until the seashore is approached, when it descends suddenly and rapidly into the little vale of the River Lebu, close to the town. We met and passed a great number of ox carts, laden with flour or goods, from and to Cañete and its neighbourhood. As yet this mode of transport suffices, but in a very short time it is to be expected that some other means will have to be adopted, as

already alluded to in a previous chapter. We remained only a few days in Lebu, and then took the coast steamer to Valparaiso, where we arrived on Christmas-day, having been kept out at sea for several hours owing to a dense fog. The weather was cold and raw compared with the mild genial temperature we had enjoyed inland. The journey from Valparaiso to Santiago is now performed with ease and comfort by the line of railway, which was completed in 1863, at a cost of over eleven millions of dollars. It runs through the defiles of the Cordilleras, passing along several large and fertile valleys, and rising to a maximum height of 2,470 feet above the level of the sea. At the summit the curves are very sharp, and the gradients heavy, and there are several long tunnels. The scenery, though grand in its way, is monotonous. With the exception of the few cultivated valleys the eye meets only barren and forbidding masses of rock, on which nothing grows except a few dismal-looking cacti, and here and there a lonely palm-tree. The few valleys among these dreary stones are like oases in a desert. They are extremely fertile, being plentifully irrigated with snow-water, bringing down fine mud, which forms a good soil. The valley of Limache is a perfect garden. Flowers of all sorts grow in great abundance, and the railway station is perfumed with the scent of the bouquets brought down for sale to the travellers.

Besides flowers, this favoured valley grows all kinds

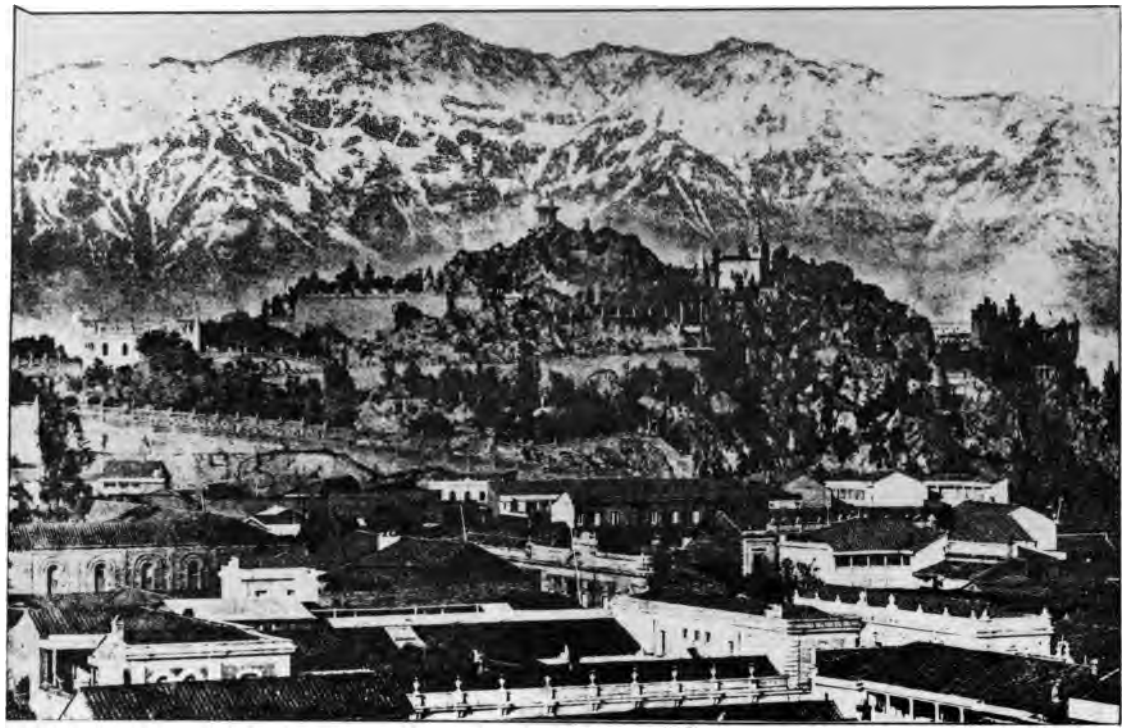
of grain, vegetables, and vines. An excellent claret is made from vines imported from France, and planted on the *hacienda* of the late Don José Tomas Urmeneta, a name associated with the great industries of Chili—copper-mining and farming. The largest valley is that of Llai-llai (an old Indian name, pronounced Yai-yai), which is about half-way between Valparaiso and Santiago. There are long lines of poplar-trees in all these valleys, particularly Limache, where the railway runs through a lane of them three miles long. These trees are planted in many parts of Chili, and grow rapidly and luxuriantly, if such a term can be applied to so meagre a tree as the poplar. After leaving Llai-llai the line runs through a barren district, unrelieved by any fertile spots, up to the summit, and down towards the central valley. Scarcely has the train emerged from the rocks of the Cordillera when it reaches Santiago. The approach to the capital is not announced by any suburban villas or country houses; but, almost directly from a wilderness of rocks, the train enters a long street, between walls and houses, with a tramway running alongside; and suddenly the traveller finds himself almost in the centre of a large city. The station is at the bottom of the "*Alameda*," and almost in the heart of the town.

CHAPTER VIII.

The Alameda—Santiago, founded by Valdivia—Santa Lucia—The Town—The Manta—Old and New Fortresses—Earthquakes—Population—Religion—The War—The Government—The University—Quinta Normal—Productiveness of the Soil.

THE first impression made on the mind of the traveller as he drives up the *Alameda* of Santiago is a pleasing one. The fine broad avenue is planted with a double row of gigantic poplars, and lined during the greater length with fine houses; some, indeed, might be accurately described as palaces. The centre walk, or promenade, of the *Alameda* contains statues erected to the memory of the heroes of the Chilian war of Independence—O'Higgins, San Martin, Freire, Carrera, and the monk and historian Molina; and here, during the season, a crowd of well-dressed citizens spend a few hours in the afternoon or evening.

Santiago is situated at the head of the great central valley where the spur of the Great Cordillera runs down to the sea-coast, forming an imposing amphitheatre of rock, at the base of which the town is built. It was founded by Pedro Valdivia in 1541, when he reached the banks of the River Mapocho, after his march across



SANTIAGO.

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the desert of Atacama. He had made a vow to name the first town he founded after the patron saint of Spain, and hence he gave the name of St. Iago to the capital of the new conquest, calling the land he then took possession of in the name of the King of Spain, "New Estremadura." The site of the town, as in the case of all the places founded by Valdivia, is strategically well-chosen. He took advantage of a huge mass of rock which rises abruptly, and is isolated from the plain, to establish a fort, and around this he marked out the town, giving to each of his followers a piece of land on which to build a house. This rocky eminence now stands in the centre of the city, and is called Santa Lucia. It is used as a promenade by the inhabitants, and from it an excellent view is obtained of the superb scenery around. It has, unfortunately, been made the object of embellishments in the shape of turrets, crenated walls and rockeries, some of which might have been omitted with advantage.

But the view from the summit remains in all its pristine beauty. The peculiar charm of the scenery lies in the great contrast between the high mountains, some of which rise far above the line of perpetual snow, and almost surround the town, and the great level plain which extends towards the south, until it becomes lost in the violet haze of distance. Even in this land of beautiful scenery there is, perhaps, no other point whence the spectator can look up to peaks rising 17,000

feet above the level of the sea, and also gaze over a perfectly level plain as far as the eye can reach. From Santa Lucia, too, a good view of Santiago, with its straight parallel streets and numerous gardens, is obtained. The town was originally laid out by Valdivia in squares, or "*quadras*," which he divided among his soldiery. The streets all run at right angles. Those running north and south are the wider and more important, while the others have the width and character of lanes. Several large and fine squares diversify the monotony of the place. The houses are mostly one-storied, and occupy a considerable surface. A large courtyard, round which runs a verandah leading to the different rooms, forms the centre of the dwelling. Every house has the luxury of a garden, and many of these are well kept, and redolent with the scent of flowers. The main "*Plaza*" is a large open space, with the cathedral forming one side, and some public buildings another, while modern houses with arcades complete the square.

The streets in the vicinity of the *Plaza* contain the principal shops, and form the busy part or "*centro*," as it is called, of the town. Santiago is not a bustling, busy town, after the modern fashion, but a quiet old modish sort of place, where every one knows every one else, and people live *en famille*. There is a good deal of movement in the forenoon and evening, but it is sedate and noiseless. Tram-cars run all day long

through the principal streets, and, in the evening, a good many private carriages are seen conveying the occupants on rounds of visits, or for a drive to the Cousiño Park. The streets are more crowded in the forenoon than during the rest of the day. It is the time when the business of the place is transacted, and when the ladies, after having attended church service, go out shopping.

The ladies of Santiago have preserved the old Spanish custom of going to church dressed in black, and wearing a *manta* instead of a bonnet, which in reality forms a most graceful head-dress. This simple dress is very becoming; at any rate, to my mind, it seemed to set off the natural beauty of the Santiago ladies, and they appeared to me more attractive in the plain but graceful *manta* of the forenoon, than in the bonnet "à la mode de Paris," which they wear in the afternoon, when driving about the town or in the Park Cousiño. As a rule, they dress with very good taste, and do not try to spoil their appearance with a promiscuous jumble of inharmonious colours. The Santiago ladies are mostly accomplished; they are nearly all good musicians, and generally well educated. In olden times, and even until within a recent period, the young lady of Santiago received no other than religious instruction from her confessor, and she led, before marriage, almost the secluded life of a nun, rarely leaving home except to go to church, and then

always accompanied by a duenna, and in due time was married by her parents to a desirable husband, without having a voice in the matter. Among old-fashioned people in Santiago, even to the present day, the prejudice against allowing a young person of any grade to leave the house alone, still prevails; and I have heard of an old lady who would not allow her maid, aged thirty, to go out in broad daylight, without being accompanied by the coachman. Modern society in Santiago has, however, revolutionized the habits and customs of the old days; and now young ladies are taught music, foreign languages, and any art or accomplishment they may evince a taste for. As a matter of fact they are extremely clever, and excel in numerous accomplishments.

Many of the inhabitants of Santiago are of fair complexion, and this must be attributed to their descent from emigrants from the north of Spain. There are very few families in Chili, at the present time, who can trace their descent from the early conquerors. The first invaders were soldiers, more bent on conquest, or plunder, than on settling in the country and colonizing. Many died, some were fortunate and returned to their own country possessed of wealth, but only a few became settlers. According to Don B. Vicuña Mackenna, few families of Santiago date farther back than 1730, when the town was destroyed by an earthquake, and rebuilt and repopulated by emigrants from the province of Biscay. The present city, therefore, is comparatively

modern, and nearly all the houses are constructed with immensely thick walls, and are only one story high, on account of the earthquakes, which are very frequent, though not generally very severe. Scarcely a week, and at times not a day, passes without some trembling of the earth, but beyond a shake, and perhaps a crack in some badly constructed building, no harm is done. The townspeople are quite accustomed to these visitations, and accept them as necessary evils of existence. A lady blandly remarked to me: "You have your storms, with thunder and lightning, and also floods and fogs in Europe, which are more disagreeable and more destructive than our earthquakes." They produce, however, a very unpleasant impression on those not accustomed to them, and it is said that strangers never do get quite habituated to them. *Apropos* of earthquakes, I heard an account of some person who came from Europe to transact a matter of business in Santiago. When he landed in Valparaiso the ground trembled. He hurried on to Santiago, and was roused during the night by a more than usually strong oscillation. This had such an effect on his nerves that, heeding no other impulse than that of fear, he fled back to the seaport, got at once on board a steamer, and returned to Europe without effecting the object of his journey.

It is on record that, during every century since its foundation, Santiago has been visited, at least once, by a severe earthquake. The first in March, 1575, shortly

after the foundation of the town ; the second, and most terrible of all, in May, 1670 ; the third in July, 1730 ; and the last two in November, 1822, and February, 1835, when the whole of Southern Chili was convulsed. The growth of the city does not appear to have been checked by these strange natural phenomena, for the inhabitants, who numbered 69,000 in 1854, increased to 115,377 in 1865, and 127,714 in 1875.

During the season Santiago is very gay. The older families form a coterie among themselves, rather exclusive but very pleasant for those who belong to it. It is the ambition of every Chilian, who possesses wealth by inheritance, or acquires it by industry, to become the owner of a house in the capital. As the town is increasing in population and wealth, it is impossible to purchase, and so every rich man, not possessing a house by inheritance, builds one. Among the newer constructions, resulting from fortunate speculations in mines or minerals, some are very handsome, and would not disgrace the fashionable quarters of European towns. They are all constructed on the same general plan of verandahs surrounding an open or roofed-in court, and are often sumptuously and sometimes elegantly furnished. The hospitality of the Santiagian is much more generous than that of the ceremonious and reserved Castillaño of the old country. The South American is more liberal than his ancestor, though still possessing some of the charac-

teristics of the Spaniard. He is fond of display and ostentation when he can afford it, punctilious in matters of form, and not disposed to pay a guinea where a sovereign will do. But, on the other hand, he is active and enterprising, and has a keen eye to adopt improvements. No country in South America has made such strides in civilization as Chili, since her independence. The old narrow-minded prejudices of the early settlers have disappeared, and habits more conformable to the ideas of modern Europe have been adopted. People have become more sociable and liberal; though in Santiago the exclusiveness of the older and better known families still remains, as well as not a little pride of their Castillian descent. The place is, however, becoming year by year more cosmopolitan. With the growing demand among the population for European requirements and luxuries, a number of strangers have settled in the town, and the foreign colony is on the increase.

But, to the traveller, Santiago presents little attraction. There are few public amusements, and no *cafés chantants* or public balls. In the afternoon "society" drives to the Park Cousiño, a newly laid out garden presented to the town by the late Don Luis Cousiño; in the evening, the promenade is continued on foot in the *Alameda;* and in winter the National Theatre is open. This theatre is one of the largest in the world, recently built after a fire which, in 1870,

consumed the old one. The public buildings are not attractive from an architectural point. The President resides in the old Spanish Mint, a large barrack-like building, painted yellow; the Houses of Parliament are modern, erected from French designs, and are cold and uninteresting; even the Cathedral is not externally imposing. The churches are very numerous, and are in great request in the early part of the day. It is the custom for women, of all degrees, to attend service in the morning, when they may be seen going in all directions towards the churches, dressed in black, and hooded in the *manta*, looking like spectres, or perhaps I should rather say like angels in disguise. They carry with them a prayer book, and a small square piece of carpet or fancy wool work, on which they kneel in the centre of the church. The clergy still have an immense hold on the population. Their influence extends not only over the masses, but also over a substantial section of the educated community.

There exists a strong clerical party as opposed to the liberal. The clericals fear the rapid strides of education, oppose social reforms or modern innovations, and, above all, freedom of thought. They still cling to the precepts of the early missionaries in the Spanish Colonies, who have handed down to posterity memories of relentless bigotry, and cruelties unsurpassed, while spreading the power and the doctrines of the Church of Rome. The days are now

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past when the priest had the opportunity of converting the unbeliever by holding a dagger to his throat; but the craft and subtlety of the Jesuit remain to beguile the innocent believer to walk in the way which best suits the ends of the great religious institution. The two main political parties in Chili may be described as clerical, and anti-clerical; and, although the latter have been, and are now, in power, the former constitute a strong opposition. It must be stated, however, that all such opposition has disappeared lately in the unanimous combination of all parties against the enemies of the country. A feeling of intense patriotism pervades all classes in Chili, and extends over the length and breadth of the land. During this last frightful and fratricidal war, the ranks of the Chilian army have been filled with volunteers, sincerely eager to fight, and ready to sacrifice anything for their country; so much so that, in Santiago, and many other large towns, it has been difficult to retain the services of the menservants.

The war was, of course, the all-absorbing event, and universal topic of conversation, during my visit. The officers who returned victorious from any of the engagements were received like heroes, and the wounded men nursed and attended to by the first ladies of the town, and the most distinguished surgeons. Yet, to outward appearances, there were no signs in the capital that such a fearful struggle existed. The thoroughfares had even an everyday look about them, there were no

crowds, no placards, and, above all, no soldiers swaggering about the streets. Few officers were seen, and they appeared preoccupied and serious, and evidently absorbed in the fulfilment of duty. Occasionally a band of recruits, or volunteers, would march up the *Alameda* from the station, dressed in the poncho and broad-brimmed straw hats of the country. They soon exchanged these for the grey linen suit adopted for the campaign in the North, and, armed with a rifle and a sword, moved on to the army, and possibly straight into action. The Chilian *peon* and *huaso* make excellent soldiers; brave, enduring, and willing they show in their fearless disregard of danger the Indian blood which flows in their veins.

The late events have been intensely exciting for the Chilian people; for their position among the South American Republics, their very existence as an independent nation, depends on the issue of the war. At the time of my visit they were on the full tide of success; the *Huascar* captured, Pisagua shelled and taken, the victorious army advancing into the enemies' territory, and the fleet, strengthened and in good condition, in command of the Pacific Coast from Mollendo to the Straits of Magellan. The Government must have had an anxious time of it; for to commence a war with ships out of trim, and practically no army, is a serious undertaking. The President is a quiet, unobtrusive gentleman, who is content to follow the guidance of his

Ministry, and who leads a retired life, avoiding the public, and escaping as much as possible both popularity and public censure.

It is perhaps well for the Republic that at the present crisis such a man is in power; one more ambitious might be tempted to take advantage of the situation for personal aggrandizement, instead of respecting the constitution. The President of Chili is a constitutional ruler, assisted by a council of state, and a responsible Ministry. He is elected for a term of five years, and cannot now serve for two consecutive terms. The Parliament of the country is composed of a Chamber of Senators, and one of Deputies. The session was just closing at the time of my visit, and I did not have the opportunity of witnessing a sitting of the Chamber of Deputies. The Senate had, however, to meet to transact some formal matters, and I had the pleasure of attending one of their sittings. The Chamber is extremely plain, and not luxuriously furnished. The strangers' gallery, which is capable of accommodating a large number of visitors, is very like the dress-circle of a theatre. One portion of it is reserved for the public, and so long as there is room any citizen can claim the privilege of witnessing the proceedings of the legislative body. The members sit in arm-chairs round the room, facing the President, who occupies an elevated platform, with a large writing-table before him. There is no tribune, and the members address

the House sitting, and adopt a conversational style. This custom may possibly have its origin in a desire to check the well-known fluency of the Chileno orator, who is at all times ready to make an interminable speech on any subject whatever.

The present constitution of Chili has existed since 1833, and has, so far, answered well. The Government and the laws are respected throughout the country, and since the promulgation of the constitution, no revolt or political disturbance has unsettled the Government or shaken confidence in the institutions of the country. The conduct of the people of Chili is, indeed, so conservative and law-abiding, that they have been denominated the English of South America; and they have hitherto always selected honourable men to represent and govern them. Chili is fast imitating the older European countries in the establishment of great institutions of education and social improvement. It must be admitted that they copy the French model most closely. The French character is more congenial to them than that of any other nation. Hence, the educated Chilian will certainly speak French, and have a knowledge of French literature, but probably not have command of any other European language, except Spanish. The English are looked up to as a great commercial people, but, as a notability in Santiago said to me, in speaking candidly of my countrymen, "Vous êtes très re-

spectable, mais vous n'êtes pas aimable ; " and with the Spaniards amiability goes a long way. Yet the great ocean steam traffic and many of the railways, mines, and commercial houses have been established by and belong to Englishmen. The Chilian is sufficiently national to look on foreigners always *as* foreigners. The lower classes delight in giving them nicknames, and an Englishman soon gets accustomed to hear himself designated as a " Gringo." All classes are, however, polite towards strangers, and, in passing through the country, the traveller will find the fact of being a stranger a sufficient passport to ensure both protection and hospitality, even without letters of introduction. At Santiago a stranger is more noticed than in the towns along the coast, where foreigners mostly are settled. In the capital the population is almost exclusively national, containing under one and a half per cent. of foreigners, or naturalized inhabitants; and these are principally French and Germans. Many of the professors at the university and schools, and the directors of the Quinta Normal are foreigners. The university was founded in 1842, and remodelled in 1847. It comprises five sections, namely: law, philosophy, mathematics, medicine, and theology; in each of which diplomas are accorded after a final examination. The Engineering department, presided over by Senor Don Ignacio Domeniko, whose name is well known to European men of science, comprises classes of chemis-

if the soil and climate are suitable to its growth, as, possibly, the revenue might even be increased by a small tax on the farmer, in case it proved sufficiently remunerative to be planted in large quantities and exported.

Attached to the *Quinta Normal* is a veterinary establishment and hospital for horses. Periodical sales of horses also take place, and the breeding of animals is encouraged. There is also a small and recently established garden of acclimatization, where a few European animals are kept, all of which seem to thrive uncommonly well. Altogether the *Quinta Normal* is a most interesting and successful institution, and does great credit to the country, and to those who have the responsibility of its management.

CHAPTER IX.

Neighbourhood of the Capital—The Quintas—San Bernardo—Baths of Canquenes—The Great Central Valley—The Population—The Railway—Talca—Arrival at Chillian.

THE natural expansion of Santiago is towards the south, in the direction of the great central plain, which extends without interruption from the capital as far as Angol, a distance of nearly four hundred miles. In this direction the citizens have constructed their villas or "*quintas*," as they call them. Santiago, like all capitals, has its season, held during the winter months, when the Congress is sitting, the courts of law are open, and all the educational establishments are in activity. In January, which is the midsummer month of the southern hemisphere, a general exodus takes place. Some persons go to their distant properties or "haciendas," others to the neighbouring quintas, while those who are not possessors of farms or country houses pay a visit to a thermal establishment or go to the seaside.

The *quinta* of the Chilian is a comfortable country house, within easy distance of the town, surrounded by a large garden and a few acres of arable land. The

gardens are really magnificent, owing to the exuberance with which trees, shrubs, and flowers grow on the soil when it is irrigated; moreover, considerable taste is displayed in laying out these little parks and arranging the foreign and native plants. Every *quinta* possesses an alley of vines, and as these grow to great perfection in Chili, they soon, when trained over frames, give sufficient shade to defy the hot sun of southern latitudes. The many-coloured foliage of the trees, some of them richly laden with fruit, and the sweet-scented flower-beds, unite to make the Chilian *quinta* a delightful summer residence.

The accommodation offered at the seaside is not as good as it might be, but, with the growing refinement of the inhabitants, watering-places are springing up which, in time, will enable the Chilenos to enjoy their holidays with every comfort. Among these marine resorts must be mentioned Viña del Mar, a new place a few miles from Valparaiso. This sheltered nook on the wild and rugged Pacific coast, was, until a few years ago, a small *hacienda*. But its advantages as a site for summer residences having been acknowledged, it soon became covered with detached villas, surrounded by gardens; and now, the number of visitors coming from Santiago, Valparaiso, and all the principal towns of the north and interior of the country is very considerable. Until recently Valparaiso was, and even to some extent still remains, the summer residence of the

Santiago people, who go there to enjoy the refreshing breeze which almost constantly blows along the coast from the south, and the invigorating effect of sea-bathing. But the commerce and shipping of Valparaiso has of late years increased to such an extent, that it has lost, in the bustle of a seaport, the necessary quiet of a watering-place. Latterly holiday-seekers have sought the retirement of the cool south, and many people from the north travel down to Talcuhano or Valdivia to avoid the heat of the tropical sun. But, whatever the place selected, the Santiago citizens must go somewhere, and those who cannot afford time or money, or both, to travel to a distance, go down by rail, at least as far as San Bernardo, a station on the southern railway, where there is a small town of *quinta* villas and houses, mostly to be let during the holiday season. At a few hours' railway journey beyond San Bernardo is the station of Canquenes, near which the baths of the same name are situated in a gorge of the lower Andes, and here hot mineral springs bubble out of the ground in great abundance.

The journey to the baths is facilitated by a regular service of comfortable "buggies," suitable for the traffic. The road from Canquenes station follows the contour of the hills, rising gradually through a green and pleasant valley right up to the great Cordillera. About twenty miles up the valley the bathing establishment is situated. Canquenes is the nearest watering,

place to Santiago; and here the citizen comes for relaxation, health, or amusement, during the bathing season. The situation of the place is very romantic. The valley through which the road runs is, for some miles, sufficiently broad to be cultivated; but near the springs it becomes suddenly very narrow, almost a gullet, with a stream rushing fiercely in its centre, direct from the melting snows of the high peaks of the Cordillera. The hotel accommodation is very good, and the baths elegantly fitted up. The establishment consists of several squares, planted with shady trees, round which are the buildings containing the general and private rooms, all of which lead off from a wide and pleasant verandah. We enjoyed a long ride up the valley, which expands again before reaching the abrupt spurs of the great Cordillera. We had not time to ascend the steep mountains, but here got our first glimpse of the immensity of wild rock scenery which is peculiar to the Andes. I may add, that the springs of Canquenes are tepid, slightly alkaline and ferruginous, and are recuperative, though not very powerful.

From Canquenes down to Angol, a distance of about 300 miles, the railway runs along the great central valley, without ever passing through a tunnel, or a cutting of any great depth or length. We had the advantage of performing a part of this journey, namely, from Canquenes to Chillian, on the locomotive, and enjoyed the opportunity of a good view of this rich grain-pro-

ducing territory. The towns on the way, such as San Filipe, San Fernando, Curico, Talca, and Chillian, have all the same character and the same commercial life. They are built on the same monotonous chess-board plan, and their inhabitants are either directly, or indirectly, dependent on the produce and sale of wheat, and other agricultural produce of the neighbouring farms. Talca is the most considerable town, containing over 100,000 inhabitants. It is of modern date, having been founded in 1743, but it has risen to considerable importance since then. It possesses, among other undertakings, several breweries, a large flour-mill, and gas-works. The principal commerce lies in different grains, but especially wheat and beans. The railway line runs almost always down the centre of the plain, which lies between the mountain range of the Andes and that of the coast—the latter being insignificant in comparison with the former. At times, spurs from either range run into the plain, almost closing it up, and for a few miles the line will pass through a contracted valley, narrowing almost to a defile, and then emerge again into a plain, expanding in width at times to forty miles.

The whole of the central valley is cultivated, and the traveller passes through a never-ceasing sequence of fine fields of wheat, interspersed with gardens of the haciendas, and long rows of tall poplars. Many of the fields are walled in, and are crowded with

cattle. Some of the land did not seem well attended to, and never did I see the thistle grow to such a height as here. The cattle looked fat and well. We passed a good many little villages, apparently inhabited by labourers, and composed of huts constructed either of tree branches, or mud bricks, termed "*adobes.*" These *adobes* are very generally used in this part of the country, and even at Santiago. They are made of the clay-mud of the upper soil, mixed with cut straw, or even dung, and worked into a sort of paste or puddle, with the addition of water. This is then moulded into large-sized bricks, and dried in the sun. The puddle, when wet, is also used in lieu of mortar. When fields are walled, no other material is used, and most of the houses are also constructed with it. It is said to be able to resist the effects of the earthquakes better than any other material, as it bends under the oscillations, and the walls are thus less liable to crack, or fall, than when constructed of stone or bricks. The modern class of houses in Santiago and the large towns are, however, built of stone, with massive foundations and thick walls.

The farm labourers lead very much the same sort of existence as the miners. They live in rude hovels, enjoying few comforts, and are probably satisfied with even less than the other classes of workmen. They are said to become attached to the estates on which they work, and the families they wait on; so

that a kind of pseudo-feudalism has sprung up among the Spaniards, and the semi-Indian population that serve them. Many of the huts were erected close to the line, and the railway seemed to be used almost as a road. People were walking and riding in front of the locomotive as unconcernedly as if there were no traffic along the line; and, on several occasions, the train had to be slackened to enable a caballero to clear off the track. In order to avoid accidents, the locomotives, which, by the way, are of American manufacture, as well as the rolling-stock, are provided with powerful steam-brakes; so that the train can be brought to a stand within a very short distance. We reached the town of Chillian, our destination, in safety, though not without certain risks, incurred by the unamiable habit the natives have of placing cairns of stones on the rails, which, had it not been for the strong cattle guard on the locomotive, and the steam-brake, might have caused a serious disaster to our train. The cattle guard is indispensable in this country. There are few fences, and these are easily cleared by the cattle and horses which roam about at will. We saw several poor cows forcibly pitched off the line, and we chased one calf for several miles, at the rate of fifteen miles an hour, before the animal would take warning from the locomotive whistle, and jump off the line.

Chillian has no remarkable features. It is a clean and, apparently, prosperous place, founded in 1837,

on the site of the old town destroyed by the earthquake of 1835. The old town was interesting as being one of the early Spanish settlements, and as the birthplace of Don Bernardo O'Higgins, son of the Spanish Governor of Chili—Don Ambrosio O'Higgins —who subsequently became Viceroy of Peru ; while his son was destined to become one of the liberators of Chili, and its first dictator after the overthrow of the Spanish authority in South America.

We devoted but little time to the survey of the town, being desirous to ascend the volcano "Chillian," and enjoy a peep at the scenery of the Grand Cordillera.

CHAPTER X.

Chillian—Drive up to the Baths—Hot Springs 9,000 feet above the Level of the Sea—The Volcanoes—A Glacier—Return to Chillian.

THE journey from the town of Chillian to the hot-spring baths, situated near the summit of the volcano, at an altitude of over 8,000 feet above the plain, and a distance of sixty miles, would be a serious undertaking, were it not for the excellent service of conveyances established and worked by the lessee of the baths, Mr. Thomas McHale. Thanks to this admirable arrangement, the visitor has only to book his place the day before his intended journey, and a seat will be reserved for him, or a special carriage sent up, if there be only one passenger. This, however, rarely happens during the season, which is very short, for the visitors quickly arrive, and continue to flock in as long as the baths are open. The carriages or buggies used for conveyance are drawn by four good horses, and are as comfortable as possible under the circumstances, as the greater part of the sixty miles is over very steep ground. There are four stations for changing teams; and, at every station, the horses are ready waiting, the change is rapidly effected, and no

time is lost. The start from Chillian is generally made in the early morning, as it takes from ten to twelve hours to complete the journey. The first stage is over almost level ground, along the banks of the River Chillian. On either side of the road, vast fields of corn extend as far as the eye can reach, with here and there clusters of trees. Several villages are passed on the way, all laid out on the usual Spanish plan, namely, broad streets running at right angles, with a large square, planted with poplars, in the centre.

One village we drove through, although formally laid out, and possessing a large Plaza, only boasted of two houses. The plan is there, but the town has yet to be built. At another village the inhabitants some years ago were in the habit of levying black mail on the coaches as they passed, by cutting the cords by which the luggage behind was fastened, and placing the unlucky passenger in the unenviable position of arriving at his destination without a change of clothes. The recovery of the property was generally impossible, as all the villagers were banded together, and were adepts in the art of deception. This state of things has, however, been remedied, and now the road is safe from these roadway thieves.

After a journey of some twenty-one miles, the first station is reached at the farm of Saldias, historically celebrated for a defeat which the ferocious Benavido suffered during the War of Independence. Shortly

after leaving this station we reached the foot of the Cordillera, and the road began to ascend in a zigzag manner. We soon gained a considerable height, and had a beautiful view of the great plain bathed in the rosy tints of the early rising sun. Up to this hour the temperature was comparatively cool, but the sun rises rapidly in the 36th degree of latitude, and we were rejoiced when before mid-day we found ourselves under the shade of the fine old trees of a virgin forest.

The greatest inconvenience on this part of the journey is caused by an impalpable dust, which almost blinds, and against which no clothing is proof. This is made worse by the traffic which is met, in the shape of rude carts coming from the forest laden with wool, the produce of the herds of sheep and goats that browse among the rocks of the mountains, and with wood and charcoal. This dust greatly increases the satisfaction of the traveller at finding a restaurant at the next stage, where a very fair breakfast is ready for him. The journey is now continued under the shade of immense "Robles," a tree somewhat resembling the oak, but growing taller and with fewer branches. The characteristics of the forests in Chili are very similar, being always remarkable for varied tints of green, beautiful lichens, and graceful ferns. The road became wilder as we advanced, and crept along a narrow gullet between high masses of rock, with a rapid limpid

stream, called the Renegado, which brings the melting snows down from the volcano of the same name. The last stage is at the end of the little valley, where the waters of the Renegado come tumbling down over a steep rocky bed. Here the scenery is very beautiful; the perpendicular rocks on either side of the gullet rise up to an altitude of about 500 or 600 feet, and are festooned with creepers and dotted with ferns, through which numerous little waterfalls glisten like silver threads, the water sometimes falling perpendicularly down for a hundred feet, then breaking into spray on some projection of rock, to be seen again dancing away at a lower level. The rocks rise like walls on either side of the stream, and the end of the valley is deep and rugged. The ascent now became much more steep, the road rather worse, and the trees stunted and ragged. The horses had to stop frequently, as the great altitude added considerably to their fatigue, but at last we reached the baths, which are situated on a gentle slope, at the foot of the volcano peak. The place is not inviting as an establishment. It consists of a few rows of huts made of planks roughly put together, and capable of accommodating about three hundred persons.

Round this agglomeration of huts the bare and bleak rocks rise up to the snow-line; a little brushwood covers the southern slope, but not for any great height, and then comes the white cone. The temperature, particularly in the evening and at night, was sensibly

cold, even during the summer month of January, and when the wind came down from the heights the temperature was quite severe. Just above the place, the two extinct volcanoes "Nevado," the old, and "Renegado," the new, tower up over the surrounding peaks. The height of this establishment above the sea level is about 9,000 feet, and it is only open for the four summer months of the year. Even during the fine season terrible storms occur, which threaten to blow away the frail structures in which the visitors are housed. In winter the whole place is buried in snow, which saves it from destruction. The little huts are more like cells than anything else. A room allotted to two travellers is about 12 feet long by 9 feet broad, and sparingly furnished. Light is admitted through a window about 18 inches square, and as the planks, out of which the hut is constructed, are roughly joined, the night air circulates freely, and when the sun rises, the light streams in through the innumerable cracks in the sides and roof. The commissariat is open to criticism, but, considering the difficulties of provisioning a place at such a height above the level land, and sixty miles from the nearest town, it would not be fair to expect very much.

Life at this place is rather dull; most of the visitors are invalids, and the days are occupied in taking the baths, and recovering from the exhausting effects of them. The mineral springs break out of several fissures in the rocks, and have a high temperature.

The vapour rises up to 212° Fahrenheit, but the water, which is conducted in pipes to the baths, has a temperature of 60° to 90° when used. The ground from which the springs issue is distinctly volcanic, and the surrounding rocks are granites, porphyries, and trachytes, more or less decomposed. All round the springs, the surface is covered with an efflorescence of salts of potash, soda, alumina, and lime, together with sublimed and crystallized sulphur. The springs vary in their composition; some of them are strongly alkaline, and others sulphurous or ferruginous. They are, therefore, useful for the cure of many different diseases. But the baths are principally beneficial for cases of rheumatism, gout, and skin diseases. The vapour is sometimes used in severe cases; and then the unhappy patient has to sit in a small wooden hut, like a sentry-box, so placed as to receive the hot and sulphurous fumes direct from the point of issue, and for as many minutes as he can bear them without being suffocated. Some distance above the baths, and close to the snow-line, a strong spring of perfectly pure water issues from the ground, at a temperature of 204° Fahrenheit. The number of baths which constitutes a course varies from eight to twelve, and visitors seldom remain longer than a fortnight in the place.

For those who are able to ramble about, the rides among the glaciers, and an ascent to the now quiet volcano of Renegado, present a good deal of interest. Although

Renegado has been inactive for some years the base of the cone is still hot, and exudes a considerable quantity of sulphurous steam. I joined in an excursion up to the apex, which is comparatively easily reached on horses accustomed, not only to the steep and rugged path, but also to the rarefied air, which is an important point. Progress is slow, and we had to stop very frequently to give the horses a rest. When we had reached a certain altitude, we found the snow lying deep on the ground, and frozen on the surface, in spite of a vivid summer sun. The rays of the latter were very trying, on account of the reflection from the snow; to guard against this we resorted to the usual custom in the Cordillera, of blacking the eyelids and cheekbones with burnt cork. The view of the Andes is weird and wild. It is like a rough sea of rock, desolate, silent, and monotonous. We heard not a sound, and saw no living creatures, not even a condor. Leaving our horses at the base of the cone, we scrambled up among the fumes of sulphur, treading our way through soft patches of hot brimstone and potash salts. The lava-like rock was also hot, and our feet were scorched. Although the volcano seems quite quiet at present, the heat, not far below the crater, must be very great to send out such masses of molten and semi-molten brimstone, and it would not be surprising to find Renegado breaking out afresh any day. When we descended to the snow, we found our horses gone.

With an extraordinary confidence in the patience of the animals, which I had already noticed among Chilian riders, the guide had left them without having either tied or tethered them. The man looked bewildered, and murmured something about Don Tomas, his master, which indicated that he would rather not meet him again without the cattle. Assuming that the horses had returned home, he started off at the pace of a practised mountaineer, following the slight trail they had left on the frozen snow.

It was now about three in the afternoon, and still quite light, but we noticed that the wind had risen, and that the clouds were gathering round the peaks. Already the very cone we had just left was enveloped in vapour, which was swiftly rolling down. No time was, therefore, to be wasted in order to avoid passing a cold, cheerless night among the glaciers. So we set off as quickly as the snow and the rarefied atmosphere would allow us, to follow the footsteps of the guide. We had only walked about five miles when we met him, with the captured steeds; but it seemed to me as if I had covered three times that distance, and I felt right pleased to scramble into my Mexican saddle, as well as my stiff and half-frozen limbs would allow me. We got to the establishment just before darkness set in, and felt no other ill-effect from our trip than a burning sensation in the eyes, which lasted for some days.

Our journey down to Chillian was of course much more rapid than our ascent, and by mid-day we reached the railway-station, where we took train for Talca, *en route* for Valparaiso, and the north.

CHAPTER XI.

Talca—Rail to Valparaiso—Coquimbo—La Serena—Copper Mining—Natural Sinods—Ovalle—Aspect of the Country.

We reached Talca in the afternoon, after a few hours' railway journey. This town is, next to Santiago, the largest in the country, and the centre of an active commerce. It is one of the few places in Chili that have remained standing since they were built by the Spaniards, having resisted the attacks of the Indians, the earthquakes, and the dangers of fire for the last hundred and fifty years. Although built on the usual rectangular system, its streets have some individuality, and the houses remind one of those of old Spain. Otherwise the town has little of interest about it. All trains, going either south or north, stop here for the night; it happens to be about midway between the two terminal points, Santiago and Conception, and for some inscrutable reason of the railway management, passengers must perforce remain here for the night.

We continued our journey next morning, and reached Valparaiso, our destination, at eleven o'clock at night. This being the summer season, we found the train crowded with passengers all travelling to the coast.

Quite an exodus towards Valparaiso seemed to be taking place, and the seaport was crowded with visitors from Santiago and other inland towns, come to enjoy the bathing, and inhale the refreshing breezes of the coast. We found the steamboats as crowded as the railways; many people were journeying from the north to the south, to seek change of temperature, while others were travelling north to visit the army, or the recently occupied positions along the coast. The journey to Coquimbo, which is the first port touched at, occupies thirty hours, and the steamer, leaving in the evening, anchored in the Bay of Coquimbo in the afternoon of the following day.

The coast-line is barren and rocky, the cliffs rising almost perpendicularly from the sea-shore. At Coquimbo, however, a wide plain opens out, watered by the River Coquimbo, the banks of which are green with gardens and fields. The broad bay is bordered by a fine sandy beach, extending in length about twelve miles, and forming a capital ride, or even drive, when the tide is low. At the southern extremity of the beach lies the little town or port of Coquimbo, while at the northern, and a few miles inland, on the banks of the river, is situated the large and important city of La Serena. This town, originally called San Bartolome de la Serena, was founded in the year 1545, under directions from Valdivia, in order to secure a point on the sea-coast for communication with Peru.

The name of the town has given rise to several legends. One is, that the Spaniards here saw a siren rising out of the calm waters of the bay, and pointing to the spot where the town was founded; another, that the name was given to the place owing to the serenity of the climate, as the seasons here follow each other with but little variation of temperature. The more probable origin is, however, that Valdivia's birthplace in Spain was called Serena, and that the new town was so named after the old one in Europe. However this may be, the situation was admirably chosen as regards climate and position. The well-sheltered port of Coquimbo gave security for the shipping, and the fertile plain, at the back of the town, promised the inhabitants a sufficiency of agricultural produce. No doubt, had it not been for the distance, and the difficult road to Santiago and the south of the country, La Serena would have become the principal port, instead of Valparaiso. As it is, the town is a flourishing centre of mineral as well as agricultural activity, which give rise to considerable traffic. La Serena presents the usual features of the South American towns, but is remarkable for the beauty and extent of its gardens. It contains nearly 200,000 inhabitants, and is the cathedral town of a bishopric. It has been less visited by vicissitudes than many places in Chili, although it suffered at the hands of two English buccaneers, Sharp in 1680, and Davies in

1686, and was almost destroyed by the earthquake of 1730.

The principal interest attached to the place and district lies in the rich copper mines, and the smelting works. There are three great copper works at, or near, La Serena, namely, those of Lambert and Company, at La Compania; Edwards and Company, at Coquimbo; and Urmenata and Errazuriz, at Guayacan. The works of C. Lambert and Company are the oldest of their kind in Chili, the founder having been the first to introduce improved methods of smelting copper ores. The discovery, working, and development of most of the rich mines of Chili have taken place in comparatively recent times. When the Spaniards first entered Chili it was with the hope of finding, as they had done in Peru, great wealth of gold in the hands of a docile and easily-conquered race. But, instead of this, they were met by hardy warrior tribes, who disputed their advance, and frequently gained the day in battle. Of gold or silver there was little or none to be found, except in the veins of the earth; and, for many years, the Spaniards were too much preoccupied with the consolidation of their conquest, and the pacification of the constantly rising Indians, to devote any attention to the mineral resources of the country.

Towards the end of the sixteenth century some miners discovered gold, and commenced working on a small scale. The attention of the Viceroy of Peru was called

to this, by sending him presents of ornaments, and vases made from the gold; but the miners were not officially encouraged in their efforts. In 1787, a court of miners, similar to that existing in Mexico, was established in Chili, and this gave the first impetus to mining. It was not, however, until after the country had declared its independence, that the mines of the rich districts of Coquimbo and Atacama were discovered. In Atacama, valuable silver ores are found, while, in the province of Coquimbo, copper forms the chief mineral wealth. When the wonderful ores of these mines, containing from thirty to sixty per cent. of copper, were first worked, a primitive and wasteful process was adopted. The ores were roughly smelted in small blast-furnaces, with charcoal or wood, and the scoriæ, or slags, containing fifteen per cent. of copper, were thrown away. The comparatively poor ores were entirely rejected as useless. Thus, for some years great mineral treasures were ignored, and none but the richest mines were worked, and those only in a crude and wasteful manner. It was in 1840 that the first reverberatory furnace was erected, and a change in the system of smelting introduced. At first wood only was employed as fuel for smelting, but since 1851 coal, from Europe or the south of Chili, has been almost universally used. After the introduction of a more rational mode of smelting, the development of the mines followed rapidly; and Chili now possesses copper-smelting

works which, as to size and method of working, compare favourably with any in the world. Copper ore is found in such abundance in the province of Coquimbo, that it may be said that all the mountains are impregnated with minerals. These vary very much in composition and character, and the art of the smelter consists in mixing the different sorts in such a way as to produce a good melting charge for the furnace. In addition to the smelting of copper in the reverberatory furnaces at Coquimbo, the process of precipitation is also adopted, by which the ores are treated by sulphuric acid, manufactured on the spot, and the copper precipitated in iron tanks. The greater number of the smelters only produce regulus, which is exported to England. Some go a step further, and manufacture rough copper, known in commerce as Chili bars; and only a few complete the process by refining, and exporting ingots of fine copper. Among these, the works of Messrs. Urmeneta and Errazuriz are conspicuous. The quantity of copper regulus and rich ores exported from the port of Coquimbo is very considerable.

Coquimbo is a good anchorage, and tolerably safe bay. It is the station of a British storeship, for the use of the Pacific squadron, and frequently one or more British men-of-war are lying in the roads. At the time of my visit H.M.S. *Osprey* was in the harbour, and I may be allowed here to acknowledge the kind hospitality of the officers of that ship. The drive or ride

from Coquimbo to La Serena, along the sandy beach, is very enjoyable, and is a favourite resort of the inhabitants of both towns. On Sundays, a crowd of persons come from La Serena, and many of them take advantage of the opportunity, when the tide is low, to enjoy a sea bath. La Serena, although an important town, is rather monotonous in spite of its fine Alameda and large *Plaza*. It is connected with Coquimbo by a railway, which is continued to the copper smelting works of Messrs. Lambert & Co., at La Compania.

These large works are specially interesting, as being the first of their kind established in Chili. They are in full operation, and give employment to a large number of workmen.

La Serena, as already stated, is built on the banks of the River Coquimbo. The valley through which the river flows extends for many miles into the interior, and is extremely fertile and well cultivated. The *haciendas* or farms are very valuable, and find a ready market for their produce among the mining population of the district. At the mouth of the river are some remarkable terraces of shingle, extending like embankments, and rising one above the other. According to Lyell, these must have been formed by the sea during the gradual raising of the land. They are, in fact, the old beaches thrown up by the regular movement of the wave. But from their extreme regularity and sharpness of outline, it appears to me more probable that they

have been raised to their present position by some sudden elevation of the ground, rather than by a slow and gradual process. They are of a recent geological age, as shells of existing marine species are found in abundance on their summit. No doubt the plain which extends below them was at one time submerged, and the mouth of the river then an estuary.

On the southern side of the bay, namely, at Coquimbo, the rocks rise abruptly from the sea, forming a small promontory, behind which is a sheltered haven, where the Guayacan copper works are situated. The railway, which connects La Serena with Coquimbo, branches off before reaching the port, and is continued over the plain, and up the mountains, to the small town of Ovalle, about sixty miles in the interior. The line, after crossing the level ground, which extends from the sea to the foot of the mountain range, ascends, by a series of steep gradients and sharp curves, to a height of about 2,000 feet; and then enters a barren and desolate valley, covered with boulders of granite. This valley expands into a plain at the juncture of several others, one of which forms the watercourse of a feeble stream. The mountains around are all sombre, and perfectly devoid of vegetation. Roads lead along the centre of the dry dusty valleys to different mining districts; and the dust may at times be seen rising along them in spiral clouds, caused by whirlwinds. These seem to follow certain

directions, and a long line of small clouds may sometimes be seen hovering over the roads, up the hillside, and onwards for miles. The ground varies little, until Ovalle is reached, a poor little town, forming the centre of a mineral district. The granite alternates with stratified rocks, and porphyry, and the surface sometimes shows a faint trace of herbage; but in summer time the only green to be seen is that of the numerous copper ore outcrops, or the *débris* of some mine.

The abundance of copper in this district is perfectly marvellous. Almost every stone contains a trace of metal, and it would be difficult to open a cutting anywhere without coming across some veins of ore.

But these veins are not all profitable to work, although the appearances are so deceptive that they frequently lure the miner into hopes that are never realized. There is a great deal of copper ore disseminated over the surface of the ground, but it is only at some few points that it is sufficiently concentrated to be workable at a profit. Consequently, among the great number of mines, only a few have yielded good returns. Some have, however, been wonderfully productive, and very large fortunes have been realized out of very small mines, owing to the high value of the ore. In other mines, the ores are found in great abundance, but poor in quality, and although workable under circumstances, do not offer the golden prospects which tempt the mining adventurer. Never-

theless, a considerable quantity of ore is raised from small surface workings. This is hand dressed, up to a yield of eight to ten per cent., and sent to the smelting works. The carriage of this ore mostly takes place on mules' or donkeys' backs, and long strings of these animals are seen winding along the roads all day long. The railway also carries some mineral and regulus or copper down to Coquimbo. The country along the railway is practically uninhabited, except at the different workings; and the small stations are nothing more than depôts for copper ores from the different mines in the vicinity.

CHAPTER XII.

Rail to Ovalle—Panulcillo—The Copper Works and Mines—The Donkeys—Cruelty to Animals—Aspect of the Country—The Degu—The Heat and Dust—Earthquakes—Indian Marks on Granite Stones—Ores of Copper—Rides—The Tamaya Hill and Copper Mine—The Miners—Return to Coquimbo.

THE railway which runs from Coquimbo to Ovalle also connects the village and works of Panulcillo with the port. These copper works and mines belong to an English company, and are entirely under English management. The village consists of a few small houses forming one street, and a number of huts scattered over the barren slopes of the mountains.

The first glimpse of Panulcillo is not captivating. It lies in a dry dusty valley, surrounded by brown hills. Half-way up one slope are the copper smelting works, with their chimneys belching forth sulphurous smoke; higher still are the mines, whence tramways run along the hillside to the furnaces. Not a blade of grass is to be seen, either in the valleys or on the mountains. The only vegetation visible is in the garden of the manager's house, or "Casa Grande," where a few trees and plants are preserved. The garden, with the few trees it contains, is placed on the banks of what, years ago, was a tiny brook, but this

has long been dried up, and now a scanty supply of water is raised from a well sunk on the bed of the quondam rivulet, where some moisture still percolates, and is pumped up to water the trees and the few flower beds.

The most healthy-looking plant in this garden is the prickly pear, which seems to grow in a hot dry soil, and yet bear a fresh watery fruit. Outside the high *adobe* wall which surrounds this artificial plantation, everything is barren. The flanks of the big hills are covered with loose stones, which roll down into the valleys, giving the place the appearance of huge moraines. The sky is usually cloudless, and, in summer, the rays of the sun are concentrated within the narrow valleys; the air feels electric in its excessive dryness, and the dust is painfully hot and penetrating. This condition of things becomes, however, quite changed in the spring of the year, when heavy rains take place. Sometimes, as in the spring of this year, floods occur, by which many lives are lost, and much property destroyed. Despite the uninviting nature of Panulcillo, a great many people are gathered together in this undesirable spot. The mines and smelting works give employment to a large number of workmen, and the place is full of activity.

The Panulcillo copper mine is one of the oldest opened out in Chili, and has been worked for a number of years. The great width of the lode attracted

the early adventurers. But the mineral, although present in immense quantity, is poor in quality, yielding only about five per cent. of copper. Every successive owner of this mine has had to grapple with the difficulties of smelting a poor ore in such a locality, where fuel must of necessity be an expensive article, owing to the cost of transport. The width of this wonderful vein varies from a few feet to a hundred, and the excavations in the wide parts are positively stupendous, and unequalled except in mines of rock salt. A large quantity of ore is raised daily; this is first roasted in the open air close to the mines, and then conveyed by tramways down to the works, where it is mixed with other ores from the neighbourhood, and smelted in small blast furnaces, twelve feet high. The produce is a regulus, containing about fifty per cent. of copper, which is sent to the copper works of Guayacan, or exported to England. In every case it is transported by the railway, which also serves to bring up the necessary fuel for the works. The ores, on the other hand, required for mixing, are brought to the works on mules or donkeys, the usual beasts of burden throughout the province of Coquimbo.

If there existed in the Province of Coquimbo a Society for the Prevention of Cruelty to Animals, they would find a field worthy of their labours. The unhappy brutes employed for mining purposes are ill-treated, overworked, starved, and forced to carry a load of over two hundredweight of mineral, while

their backs are raw and bleeding with ugly sores. The ores are packed in leathern bags, and fastened over the mule's back by means of long thongs. With this load they have to cover a distance of twenty or thirty miles, along the dry dusty valleys,.or on the steep paths leading over the mountain tops. There is no water on the way-side to refresh the weary thirsty animals; nor a blade of grass for them to nibble at. In the evening they get a scant allowance of hay, and on this they have to subsist while in the barren district, and to work until their skins cover nothing but bones, and the emaciated beasts sink beneath their load. Then it is considered advisable to send them away for a short time, to a pasturage in one of the watered valleys, in order that they may recover their strength. The men who drive these poor beasts along the uninteresting roads, in clouds of dust, and at the melancholy pace of the beast of burden, do not lead an enviable existence, but they seem reconciled to their lot, and are to all appearance indifferent to the mute sufferings of their unhappy companions.

With regard to the aspect of the country, custom soon reconciles the eye to the sombre colours, and the rocky outlines. Although almost repulsive to the stranger at first, he becomes accustomed to the scenery after a time, and almost appreciates the great masses of brown rocks, with their rugged outlines sharply defined against the bright blue sky. The district is not without some variety, for there are a few favoured valleys, in which

coarse grass is to be found, and here and there the slopes of the hills are covered with a rough sort of brushwood. It is said that when the Spaniards invaded the country, this district was well-stocked with timber. This, however, has long ago disappeared, and with it the moisture, so that at present the only plant which grows to perfection is the cactus, occasionally enlivened by a bright red parasite.

As may be supposed, few animals inhabit this rocky waste. The only living creature I noticed among the hot stones was a sort of rat, the degu (*Seimus degus*), somewhat larger than the European rat, with a very long tail, and at the end of it a tuft of hair something like a mop. What they feed on I could never ascertain. In addition to the heat, dust, and extreme dryness of the air, this district is subject, among other discomforts, to almost continuous earthquakes. Scarcely a day passes without a shock, and, in fact, the ground seems to be in a continual state of oscillation. It is said that these frequent shocks have a peculiar and baneful effect on the constitution of nervous persons, and that this effect increases with age. They are certainly unpleasant to those unaccustomed to them, who do not relish being roused at night by the shaking of the bed, and cannot enjoy a breakfast while the cups and saucers are dancing on the table.

It is impossible to avoid the recollection of the great catastrophes of the past, when experiencing even a slight convulsion, and the possibility of the recurrence of

such an event at any time forces itself on the mind. This is not so much the case with people resident in the country, and accustomed to the trembling of the earth, as with strangers; but I was told that a great deal of heart disease exists, not only among the people, but also among animals, including poultry. It is quite certain that physical exertion, except in moderation, is injudicious, and that the use of stimulants or narcotics should be extremely limited, in order to preserve health. Riding is the greatest, I might almost say the only, rational amusement people in this part of the world have at their command. Every one rides, not only as an amusement, but as the only way of getting from place to place, and a journey on horseback of fifty or sixty miles is quite a matter of ordinary occurrence.

Through the courtesy of my host, the General Manager of the Panulcillo Copper Company (Mr. Jones), I was enabled to see a good deal of the country, and the copper mines, which form the most interesting feature of the district. There are no buildings or records of the past generations who lived in the country, although close to Panulcillo there are some remarkable signs cut on large granite boulders which are supposed to be of Indian origin, representing circles probably meant for the sun. From the designs, they are presumably marks left by the Peruvians, who conquered this part of Chili during the time of the Inca Yapanqui, in the middle of the fifteenth century.

The aboriginal inhabitants have long since disappeared, and the taciturn Indian in his blue poncho and red head-band would be regarded in this district with quite as much curiosity as a Laplander. The only interesting features are the copper mines, which are numerous and varied in extent, richness, quality of ore, and mode of working. Some of them are worked like quarries, where the mineral crops out to the surface, and impregnates the rocks. In such cases the mineral is frequently a carbonate or silicate of copper, which, by hand dressing, is brought up to a yield of eight or ten per cent. of metal. The absence of water precludes dressing the ore up to a high standard. Such mines are generally owned by local adventurers, who work them with little capital, and less mining knowledge.

There are numerous mines, of various depths, where richer or more defined veins have been followed underground. Many of these are worked at a profit when the price of copper is good, but only a few yield the rich ores which give great returns. The finest omners are situated in the Tamaya district, where almost every shaft has returned a fortune to the owners. Tamaya is an almost isolated hill, rising nearly perpendicularly on the eastern side of a confined valley to an altitude of about 3,000 feet, and sloping down more gradually on the west to the plain, which extends to the sea-coast. A railway has been constructed from Tongoy, a small port, where there are

copper-smelting works, belonging to Messrs. Urmeneta and Errazuriz, nearly up to the summit of the Tamaya hill. The railway ascends the more gentle slopes of the western sides of the mountain to a height of about 2,000 feet, when it crosses over a low neck of the range to the eastern slope, and runs along the side of the hill on a formation cut in the rock like a ledge, and about 2,000 feet above the level. The mines are all opened above this altitude, so that the line is able to take the produce down to Tongoy, either to be smelted or exported. The appearance of this hill as seen from the valley on the eastern side is most striking and original. It looks like an immense wall of brown rock, on the top of which, or nearly so, a toy-like train is puffing backwards and forwards between the different mining establishments, with their little pasteboard houses stuck on the straight dark background. I travelled with a guide whose conversation was of a restricted character, but who, well acquainted with the country, seemed to enjoy my exclamations of surprise. Soon after commencing the ascent of this precipitous mountain, we passed through a village rejoicing in the well-sounding name of "*Oro*," but consisting of five or six hundred dirty-looking huts, constructed of loose stones piled one on the other, or cemented with a little mud, and most irregularly pitched on any small ledge presenting itself on the steep acclivity. Literally, the floor of one house is on a level with the gable of the

next. After threading our way through this conglomerate of hovels, over great stone steps which constituted the village street, we came to a narrow track leading up to the mines. This path was as steep as it well could be for horses, and ran up the hill in several short zigzags. The morning sun by this time was shining brightly and hotly on the rocky hillside, and every step the horses took raised a thick cloud of choking dust. The nearer I approached the mines, and the better I distinguished the houses, the shafts, the engines, and the men, busy amidst heaps of minerals, the less I could comprehend how space was found for all this to stand on. One shaft was just above our path, and I could not suppress a dread lest the whole establishment might come rolling down on us. When we reached the level of the works, I discovered a tolerably broad road, cut out of the rock, running along from end to end of the hill, just above the line of railway and connecting the different shafts. At some points it dwindles down to a mere mule track, sometimes passing over great heaps of rolling *débris*, where the footing is uncertain. Along the track we met long troops of donkeys laden with ore, and at times the passage became almost perilous.

Here and there we found an exhausted donkey lying on the pathway with his load, and left to recover and rise as best he could, or roll down the steep declivity and become food for the condors. Six mines are

opened along the crest of this great copper mountain, all of which have now passed through the zone of greatest productiveness. It is a peculiarity of the copper deposits of this district that the upper beds are much richer than the lower. The rich sulphides, containing from fifty to sixty per cent. of copper, which are met with at shallow depths, become poorer in descending; and it is generally supposed that below a certain line they turn completely into iron pyrites. This zone has not as yet been reached by any of the Tamaya hill mines, but the ores are gradually getting less rich, and the high class mineral which has been the origin of so many princely fortunes is no longer found in abundance. But large quantities of ore, somewhat inferior—though rich as compared with the average European copper ores—are still raised.

My purpose was to visit the Saúce mine, the richest on the mountain, discovered and worked by the late Don José Tomas Urmeneta, one of the most intrepid and successful of miners. The main level and works of this mine are situated on the western slope of the hill, so we had to ride across the summit and descend by a steep zigzag pathway on the other side, until we reached the establishment placed half-way down the mountain. Here we found sorting and washing floors, great heaps of *débris*, and hundreds of miners' huts, strewed all over the slope. Below us, we could see a great plain, extending to the sea-

shore, with some broad patches of green, and a few trees where water existed. Far away, close to the broad line of the ocean, the blue smoke of the smelting works rose slowly in the clear atmosphere. Hundreds of mules were clambering up or stumbling down the winding path, at the end of which was the railway line, and there stood several houses—among them, but a little on one side, hidden among a few trees, the establishment, or "*casa grande*," where I eventually received a kindly welcome from the mine manager. The miners' village resembled Oro, the usual type of such places in the north of Chili. The little huts are mostly constructed of stones piled up dry, and inclined from a certain height so as to join and form a roof. They are scattered over the side of the hill, and around the mouth of the level of the mine. Here the miners live and work, with little amusement beyond an occasional carouse, and a drink of wine or spirits. They are capital workmen, hardy, strong, and enduring, and are contented with very simple food. At most mines the owners provide this for them, and the diet consists principally of dried figs and beans, with a little meat and bread. The rations are served out in the morning, and are considered as part payment of wages. The men are generally paid by the month, and earn, on an average, about fifteen dollars during that time, in addition to their rations. Many of them lead a nomadic life, wandering from mine to mine as fancy or circumstances direct

them. But everywhere they have to work hard. In many mines no machinery is provided to draw up the mineral, and men have to carry it on rude ladders, bringing up heavy loads at a time. Living, as they do, in a wilderness, they are rough and uncivilized. When they fight, it is with knives; and if the feud be a serious one, they tie their left legs together and fight till one falls dead or is seriously wounded.

Until quite recently there was no church at the Saúce mine, and, at the time of my visit, no resident priest. Occasionally, a *padre* or monk pays a flying visit, and christens or marries several hundred people in the course of a few days. I was informed that on one occasion the priest had a great many marriages to celebrate, and after marrying a young woman, the mother of a family, she came to him and requested his assistance to persuade her father, the smith of the establishment, to have the holy knot properly tied between himself and *his* wife. The united efforts of the daughter and the priest prevailed, after some trouble, over the objections urged by the old man, who had been married, as he said, by God's will for over forty years, and could not see what the priest had now to do with it. Thus these people live, having little or no knowledge even of the religion they profess.

The adit which now serves as outlet for the produce of the mine is 2,000 metres long, and intersects the vein below the richest deposits of mineral. In the present

working places the ore is of a yellow colour, and contains twenty per cent. of copper; and in depth it becomes still poorer, and appears to be turning completely to iron pyrites. At Saúce the water coming out of the mine is sufficient to enable dressing floors to be worked, and the poor ores are concentrated. When the price of copper is high, it even pays to dress over the refuse of former days, which contains a good deal of metal.

After a very interesting time spent at this and other mines, I rode back to Panulcillo, across the barren desolate hills. The country is only sparsely inhabited, and few buildings are to be seen, except at the different mines. It is possible to ride for a day and not see a living creature, except the bushy-tailed rat dodging among the stones, or the mighty condor settling down on the carcase of a donkey. We disturbed a flock of these birds on one occasion, and the sudden whirring noise of their mighty wings as they took to flight was something not readily to be forgotten. The general aspect of the district is the reverse of exhilarating, and the excessive dryness of the atmosphere, the great heat, and the dust render travelling most fatiguing. I was pleased to breathe again the refreshing sea breeze at Coquimbo, whence I soon embarked in a Pacific Steam Company's boat for Callao and the north.

CHAPTER XIII.

Coast of Chili north of Coquimbo—Huasco—Fruit Girls on Board—Carrizal—Caldera—Copiapo—Silver and Copper Mines—Desert of Atacama.

THE coast-line of Chili north of Coquimbo is even more forbidding and monotonous than that of the southern territory. The cliffs are dark-coloured and barren, and rise almost perpendicularly from the ocean, over which they throw their long black shadows. At certain points valleys run down from the mountains of the interior, and widen out into bays at the sea-shore; and these form the ports or loading places along the coast. Sometimes, but rarely, these valleys are watered by small streams, and then they are fertile and populated, and form the means of communication between the interior and the sea-shore. The country north of Santiago consists of a series of valleys running at right angles to the great chain of the Andes, until the desert of Atacama is reached, when the configuration becomes changed, and the hilly ground alters to an undulating plain, traversed by ridges running parallel with the Cordillera. At the sea-shore the land rises abruptly to a height of 1,500 to 2,000 feet, and thence gradually to heights of 8,000 and 10,000 feet, whence rise

the steep peaks of the Andes. Here and there, an indentation in the rocky wall which borders the sea forms a sort of bay; and sometimes, if the ground is not very steep, a ledge, or perhaps a little plain, covered with sand, may be found, and such spots are secured for establishing ports, and erecting mining villages, smelting furnaces, or nitrate works. The first port we touched at after leaving Coquimbo was Huasco, situated at the mouth of a fertile but narrow valley of the same name, celebrated for its excellent grapes and raisins. This valley is about forty-five miles long, and, owing to a constant rivulet which flows along it, is ever green.

Here the ship was invaded by a crowd of women and girls, with baskets of grapes and other fruits for sale. They found good customers among the passengers, and most of them left the ship with empty baskets. The Huasco valley also contains some rich silver mineral, and is, in fact, the beginning of the important silver ore district. From this point northwards copper becomes gradually less abundant, and is replaced by the still more valuable metal.

Huasco was the last place at which our eyes feasted on green vegetation until we reached the neighbourhood of Callao. The whole coast-line, for about 700 miles, is one uninterrupted wall of brown, barren, and steep rock. Most of the little towns, or establishments, are quite new, and have sprung up in consequence of

the modern discoveries of silver, nitrate, and guano, in the sterile wilderness of the Atacama desert.

Carrizal is the first port reached after leaving Huasco, and owes its existence entirely to the rich copper mines of Mantica, Santa Vista, and Serro Blanco. A railway runs up to the mines and brings down the ores to the port, whence they are shipped mostly to England. Caldera, which is the next town on the coast, is a much more important place—in fact, the second port of the Republic, and the shipping place for the minerals of the rich district of Copiapo. It is not attractive; the streets are all quite straight, very dull, and dusty. This is the first town in the rainless region, and is dependent for a water supply on the huge distilling apparatus conspicuous among the buildings on the quay. The railway from here to Copiapo is the oldest in the country, having been constructed in 1852 for the use and development of the rich silver district of Chañaral. Before the railway was made, the poorer ores, as well as the refuse of the amalgamation process, were thrown aside. The latter was kneaded with water and made into bricks, which were used for building purposes. But when the railway was completed, and cheap transport became available, these so-called "*relaves*" became valuable, and the people at once set about pulling down walls, and even houses, built of the ore refuse, in order to sell it for export to Europe. These "*relaves*" contained as much as sixty

ounces of silver per ton, and were eagerly purchased by speculators. Since then the development of the mines has been continuous, and, at present, the exports from Caldera in minerals and metals amount in value to upwards of six millions of dollars. The town of Copiapo contains over 11,000 inhabitants, and is situated on the banks of a small stream called the Copiapo, which fertilizes the valley of the same name. This is one of the oldest places in Chili, and was the scene of the first battle between the Peruvians, under the Inca Yupanqui, in 1450, when he advanced to the conquest of Chili, and the aborigines. It is here, also, that both Almagro and Valdivia halted on their marches to the south, after crossing the Cordillera from Cuzco. Almagro reached Copiapo with his forces in a miserable condition, having lost one-fourth of his Spanish troops, and two-thirds of his Indian auxiliaries. The brother of the Inca Manco—who accompanied the expedition—in order to conciliate Almagro and his Spaniards, caused the inhabitants of Copiapo to deliver up all their gold, amounting to about a million dollars. Valdivia crossed the Cordillera at a more opportune season, and suffered no losses. He celebrated his arrival at Copiapo, in 1541, by a *Te Deum* on the site of the future city.

North of Copiapo all vegetation ceases, even in the little inland valleys; there are no streams, no rain, and no moisture in the air.

Soluble salt, such as nitrate, and sulphate of soda,

common salt, and others are in abundance on the surface, and rich lodes of silver and copper are found a few feet below the soil. The land is one great mass of mineral treasure, ready to be removed by the hand of man. The next port to Caldera is Chañaral, where a railway runs up the country for twenty-two miles, to bring down the rich mineral and take up the necessary supplies, which here include water for the workpeople. The life of the miners in this great waste is scarcely enviable. They live like men in a lighthouse on a rock out at sea, and are dependent for every necessary on a supply from a distance. Chañaral is the first point where nitrate of soda is extracted, and where the great "salitres" of the desert commence. The desert of Atacama is described as a series of valleys and ridges, running north and south, between the Cordillera of the Andes and the coast. The hills, or ridges, do not rise to any great height, and are rounded at their summits. They are perfectly arid, and covered with loose stones and sand. The geological formation of the coast and centre is plutonic, intermixed with stratified porphyries; but at the base of the Andes, the limestones of the jurassic period crop out, and contain the rich silver lodes for which the desert has become so famous.

Here and there the plutonic rocks rise above the level of the newer formation in craggy masses, crumbling into dust under the influence of the extreme variations in temperature of the parched atmosphere. The

temperature of the desert in the sun, during the summer, rises to 120° Fahrenheit, and falls in winter, at night, to below freezing point. These extreme variations are caused by the currents of air coming down from the snow regions of the Andes. The irregular crumbling of the plutonic pinnacles gives them fantastic forms, and they frequently present the appearance of dismantled castles in ruins, with serrated walls, and rugged towers, rising above the sandy plain around.

All the little places along the coast have nearly the same appearance. Taltal, the next to Chañaral, consists of only a few huts, recently established on a small rocky shelf close to the sea-shore. Both nitrate of soda and rich ores of silver and copper are brought down to this place for export from the desolate desert, where no rain falls, no blade of grass grows, and men subsist on *charqui* and distilled water. About one hundred miles north of Taltal the boundary line of the territory, until recently held by Bolivia under agreement with Chili, is reached—the territory which has been the cause of so many disputes and treaties, and eventually of the present war. The most important point on the coast-line of this disputed ground is the port of Antafagasta, now a place of some historical interest, as it is here that the works of the Nitrate Company which were the proximate cause of the war are situated.

CHAPTER XIV.

Antafagasta—Caracoles—Silver Mines—Nitrate of Soda—Works at Antafagasta—Mexillones—Guano—Cobija—Iquique—Pisagua—The Chilian Fleet and Army—The last of Chili.

THE town of Antafagasta, like all those situated along the coast, consists of large works, and a number of huts inhabited by the workmen. It is built on a sandy plain at the foot of the steep hills, and has nothing agreeable about it. Close to the beach the distilling apparatus is conspicuous, where the necessary water for the place and the salitres and mines in the interior is distilled. A railway winds up the hillside and for sixty miles into the desert, to bring down the "*caliche*," or natural nitrate, and the silver ores. The town owes its existence to the mines of Caracoles in the desert, discovered in 1870, and so called from the great number of Ammonites found in the jurassic formation, "caracoles" signifying "snail" in Spanish. Over 4,000 mines have been registered in the neighbourhood, and, in one year, the export value of the ores amounted to £75,000. The mines are situated at an altitude of 10,000 feet above the level of the sea, on the slope of the great mountain chain of the Andes.

The most valuable mineral extracted from these mines is a chloride of silver and mercury, which contains over sixty per cent. of silver and two of mercury.

The *caliche*, or nitrate of soda, found in large deposits over the desert, is very variable in quality. According to an analysis by Don Ignatz Domeyko, the "*caliche de la pampa*," raised near Antafagasta, contains from fourteen to twenty per cent. of nitrate of soda. The rough mineral, treated at the works, yields about twenty per cent. on the average. The other substances are sulphate of soda and magnesia, common salt, and a small proportion of iodine. In some *caliches* the latter amounts to 0·12 per cent., at Antafagasta probably less; but still in sufficient quantity to be extracted with profit. In the desert the deposits of nitrate are found close to the surface, in beds several feet in thickness, the crust, or covering, consisting, at times, of a few inches of common salt, at others of a layer of stones and pebbles several feet in thickness, under which lies a small bed of gypsum. These deposits are found in circular basins, which appear to be the beds of dried-up lakes or lagunes, the sides or outer rings of which contain the richest mineral. The existence of nitrate beds, when covered over with drift, is recognized by small natural pits, like wells, caused probably by the presence of water at some past period. The surface is also generally fissured, through the crystallization of the salt underneath. The deposits found in

the southern part of the desert are not so rich as those in the northern. The Peruvian *caliche* contains as much as seventy per cent. of nitrate, and is consequently much easier to treat. The process of extracting the nitrate is very simple, although the details of the works are, in appearance, complicated. The rough *caliche* is bruised between rollers, and then raised, by means of an endless chain, to the top of a tower some fifty feet high. Here it comes into dissolving and depositing tanks, placed in gradation, one below the other, until the crystallizing vats are reached, where it is extracted in the same way as common salt from brine. The nitrate is raked out to dry, and then put in sacks and exported. As it hardly ever rains in the country, the bye-works are not roofed in. Iodine forms a most valuable bye-product, and is prepared in considerable quantities. Besides the nitrate works there are several silver-smelting establishments at Antafagasta, where the usual cementation process, and also new and secret methods, are in use. By the latter much of the poor ore, hitherto valueless, is now treated with success. There are no copper works; in fact, the copper region here merges into silver, while the deposits of nitrate and guano commence. The minerals along the whole west coast of South America succeed each other in varied succession. In the south we find the carboniferous formation; towards the centre, at Coquimbo, copper ores in immense quantities; these merge into silver ores as we proceed

further north, and at Antafagasta nitrate of soda and guano make their appearance. It seems as if nature had selected this region as one on which to lavish mineral wealth.

After leaving Antafagasta we touched at Mexillones de Bolivia, which lies in a little bay behind the point of Angamos, or Bluff Head, as it is called, in the English charts, the scene of the combat between the *Huascar* and the Chilian ironclads. The high and steep ground which surrounds the bay is studded with huts and workings connected with the extraction of the guano, which is shot down plank inclines to the loading stages at the water's edge. This deposit has been only recently discovered, and was worked originally by the late Mr. Meiggs, the American railway contractor. Its composition varies from that of the Chincha islands in so far that it contains more phosphate and less ammonia. It is found in beds, and is extracted underground like the phosphate deposits of France and Germany. The origin of the deposit may certainly be considered doubtful, and as it is much mixed with the remains of fish and shells, and presents the characteristics of a sea deposit, it may be allowable to assume that it once lay below water, and became raised to its present position by the upheaval of the west coast of South America. Whatever its origin, its nature is strongly proclaimed by the odour which pervades the bay, and follows the ship at sea for miles.

We next stopped at Cobija, which is the only port or landing-place on the coast properly belonging to Bolivia. To the spectator from the bay, this unhappy little place presents a sad example of the effects of earthquakes along the coast. Scarcely a house remains which can be described as entire. Many of them are without gable ends or roofs, and in some cases the upper stories are completely demolished. The big graveyard on the hillside has a most melancholy appearance, with its walls shattered in many places, and the tombstones either lying on the ground, or standing askew over the empty graves. The ground was so shaken that the bones from the shallow graves were scattered over the surface. The place looked as if it had been exposed to a severe bombardment, and we at first imagined that we were viewing the effects of the war. This earthquake occurred as recently as 1877, and was evidently a severe one.

Cobija, or what remains of it, although the only port of Bolivia, is not much used; as the interior of that country can be more easily reached from Arica or Mollendo, in Peru. Between this port and the town of Iquique, we only stopped a short time at a place called Tocopilla, which to me seemed like the Tamaya hill transplanted to the seaside. Mines are scattered all over the hills, which rise precipitately from the water's edge. Little tracks like thin streaks run in a serpentine way, from mine to mine down to the sea-shore.

The ores are extremely rich here, and this explains the presence of inhabitants in a place so forbidding and forlorn. After leaving Tocopilla we soon reached Iquique, well known as the centre of the nitrate of soda trade, and notable as the scene of a memorable engagement between the Chilian and Peruvian fleets at the commencement of the war.

The town is built on a small sandy plain on the coast, and on the usual South American plan. Just in front of the town there are some sunken rocks, over which the waves break with great force; but the approach to the mole or landing-stage is not difficult for boats. The trade in saltpetre, which is very large, is entirely carried on by means of barges, the destruction of which at the commencement of the war stopped the exports. The place presented a more lively appearance than could have been expected under the circumstances, and the streets were well kept and watered, a luxury not frequently met with in South America. A railway runs into the interior of the desert of Atacama, to the deposits of nitrate of soda or "*salitres*."

We found a few Chilian soldiers in the town, left as a reserve. Those to whom we spoke were vigorous in their expressions as to how they would fight when they had a chance. One man, a butcher by trade and a volunteer, pulled his knife out of his boot to show us. It was as sharp as a razor, and hitherto had only been

used to cut up beef and mutton, but now it was to become useful in carving the Peruvians, as he told us, with a grin. From the appearance of the place, it would have been difficult to imagine that it had only recently been surrendered, and was then occupied by enemies. As a matter of fact, almost the entire population is Chilian, and they feel more at home under their own flag than under that of Peru.

Iquique is entirely dependent on the steamers for supplies, and on the distilling apparatus for water. Living is consequently expensive and not particularly good. I found the water in the town very unpalatable, owing probably to defective distillation. It was slightly brackish, and not only discoloured but tainted the wine it was mixed with. From Iquique we steamed on to Pisagua, the scene of a daring feat of arms on the part of the Chilian troops. Pisagua is a mere station for the export of nitrate. It is built on a narrow ledge at the foot of hills which rise almost perpendicularly to a height of about a thousand feet. A railway runs, in zigzag, up this wall of rock, with an incline of one in twenty, and disappears at the top through a cutting. At the time of the capture of the place by the Chilians, the heights were held by Peruvian and Bolivian troops, who poured down a murderous fire on the assailants. Despite this and the great heat of the summer sun, the Chilian troops made a gallant rush up the steep acclivity and gained the

summit, when a hand-to-hand fight ensued, which ended in the flight of the allied army. It is said that the men, in their enthusiasm, disobeyed the commands of their officers, and rushed at the enemy without order, and that, after the engagement was over, there was the greatest difficulty in restoring discipline. However, the battle was won, and it gave the Chilians a footing in the enemy's country, which they were not slow in taking advantage of. When I saw Pisagua, it presented the most melancholy spectacle. It had been twice bombarded so effectually by the Chilian fleet that, literally, not two stones were left one on the top of the other. The place was simply a heap of rubbish. Only one house had been saved, and that was the residence of the British vice-consul. A large number of troops were encamped on the ruins of the town and on the flat land at the top of the mountains. These were in readiness to embark in the ships then lying in the bay, for further operations on the coast of Peru. The soldiers were being drilled in firing up-hill at a target placed several hundred feet above them, the object of this practice being to accustom the men to the up-hill fighting they would necessarily have to encounter in attacking other places along this rock-bound coast. The Chilian fleet was in the bay, and everything looked intensely warlike.

We went on board the *Blanco Encalada* ironclad, and witnessed the preparations of the crew and

marines, who were cleaning rifles, sharpening cutlasses, practising gun-drill, and generally getting ready for the coming fray. At night electric signals were flashed from the Admiral's flagship to the other vessels of the fleet, and, in fear of torpedoes, a four-oared boat was kept silently rowing round and round the ship, notwithstanding the moon shone brightly through the clear dry atmosphere, and a bottle might have been seen floating in the placid green water of the ocean. Although the men were ready to embark and the fleet prepared to sail, it was not until a week after my visit to Pisagua that the expedition started which ended in the capture of Arica. When we steamed away in the afternoon we bade adieu to Chili. Up to this point we had sailed in waters in possession of, if not belonging to, Chili; but from this place northward, the Peruvians still contested the possession of the ocean. The cry of "*Viva Chili!*" was not heard again, and we saw no more of the tricolour flag and the silver star, except at Mollendo, where the Chilian corvette *Covadonga*, engaged in the blockade of Arica, boarded us for news.

CHAPTER XV.

Coast-line from Pisagua to Callao—Quilca—Chola—Lomas—Arrival at Callao—Visit to Lima—Railways—Population of Peru—Sail to Guayaquil—The River and Town—Panama—Railway across the Isthmus—Colon—Home.

AFTER leaving the *Covadonga* at Mollendo, we proceeded direct to the small Peruvian port of Quilca, giving the blockaded town of Arica a wide berth. When we sighted the coast again, it presented a somewhat different appearance from the highlands of Chili. The sea-shore now appeared as a rather broad plain, covered with sand, and rising gently to the foot of the spurs of the Cordillera. The sand which covered the ground was so white, that it looked like snow, a comparison which may seem absurd when applied to a country where it neither rains nor snows. At Quilca, we had the pleasure of once more seeing a green field, and some trees, bounding the little river which here flows into the sea. Quilca is the landing place for passengers going to a town in the interior, called Camana; but, when our steamer stopped, we took some people on board who had travelled overland from Cuzco, owing to the blockade of Arica.

These unhappy creatures seemed almost famished, and quite exhausted after their ride of seven days. They gave us a deplorable description of the country, where the inhabitants were in a state of destitution and nearly every avocation had been suspended. A reign of terror seemed to prevail, owing to the complete disorder of the Government, and the dread of a proximate occupation by the Chilians. Here we took in some cargo, consisting of Peruvian bark, and cotton, which had to be sent to England, *viâ* Panama. Between this place and Callao we stopped at two other miserable little stations, Chola and Lomas, the latter being, in times of peace, noted for the export of cattle, bred on the short grass of the lower valleys of the Andes, which are very fertile; for in this region, although it seldom rains, there is a heavy dew which moistens the land. Lomas is but a short sail from *El Callao*, and, leaving it in the morning, we reached the latter port in the afternoon.

The bay presented an animated spectacle, owing to the mass of shipping and the number of men-of-war of different nations lying in the roadstead. We distinguished the English, French, German, and Russian flags. The town is built on low land, and is scarcely seen from the port. The ground rises very gradually from the shore to the foot of the Andes, and is sufficiently elevated, at seven miles distance, where Lima lies, to give that town a most picturesque

appearance as seen from the sea. The mountains all round the town, though distant, appear, from their great height, to encircle it with a romantic outline; and, beneath the clear blue sky and brilliant sun, the many churches rise up above the low, flat-roofed houses like colossal edifices.

El Callao must be a thriving busy port in times of peace, judging from the extent of the docks, and the number of vessels in them even during times of war. The town is irregularly built, and many of the streets are narrow. In the principal thoroughfares, the houses are constructed of *adobe* bricks, or even stone; but most of the smaller habitations are run up with bamboo, like baskets, and plastered over. Two railways run from the port to Lima. One belonging to an English company, which goes no farther than the capital; the other, called the American, but in reality a State line, continues beyond Lima, up the Andes, and is known as the Oroya line. This railway is world-famed for the steepness of its gradients, the magnitude of the engineering works entailed in its construction, the immense sum it cost, and, it may be added, the want of careful survey of the ground preliminary to its projection, and its inutility when completed. The line was constructed at the cost of the State, by the President and his Ministers, but was in reality a contractors' line, destined especially to benefit the latter; and it remains now a painful example of the

prodigal lavishness of a country's resources by unscrupulous adventurers, raised up to power on a wave of revolution.

Lima, generally described as a gay city, presented a doleful aspect at the time of my visit. Most of the private houses appeared to be closed and uninhabited. Many of the shops also were in the same state, and those that were open did not look as if much business was being transacted. Scarcely any private carriages were to be seen in the streets, and few hackney coaches. The people looked sad and silent, and a great cloud seemed hanging over the town. The public gardens were literally empty. Under the circumstances, the town offered few attractions to the visitor, nor indeed was it a place for a stranger to stop in, with the probability of the enemy being at the gates in a very short time.

The traveller cannot visit Lima without being struck with the great diversity of race which, judging from the physiognomy, exists among the inhabitants of this town; and, I believe, among the whole population of this country. It is easy to recognize among the lower classes the descendant of the negro slave, in contrast with the sallow complexion, aquiline nose, sleepy eye, and straight black hair of the aboriginal Indian. Then, again, the copper-coloured Chinaman, with his peculiar shaped eyes, is not uncommon; and mixtures of these three races, with some European blood in addition, form

the bulk of the population. The pure European type, descendant of the old Spanish settler, is comparatively seldom met with. The cause of this variety of race in Peru is owing, firstly, to the importation of negroes, as slaves under the Spanish rule, to supply the place of the Indians who, from various causes, were dying out; secondly, to the introduction of Chinese labour by the Republican Government to take the place of the negroes, who, on being made free by the National Government, refused to do any work. Many of the Chinese, after completing the term of labour for which they had contracted, settled in the country, and some of them are to be found now among the wealthiest shopkeepers of Lima. This mixture of race has not improved the physique of the population; and a more uninteresting, not to say repulsive-looking, crowd than the Peruvian lower class can scarcely be conceived.

The Pacific Company's steamer *Truxillo* steamed out of Callao on the 26th of February bound for Panama. The first port we made for was Payta, a curious little town, constructed almost entirely of wood, and situated in the middle of a waste of rock. Not a tree nor a blade of grass grows within miles of the place, and this lack of vegetation is so notorious that a story is current of a tree painted on a house front being licked off by donkeys, in the absence of more substantial green food. After that the tree was painted blue.

Leaving this uninteresting spot we made for

the River Guayaquil, passing close to Tumbez Point, where, it is said, the Spaniards landed on their first expedition across the line, and where recently coal has been discovered. The sail up the River Guayaquil, to the town of the same name, is extremely charming. The banks are covered to the water's edge with rich tropical vegetation, and small green islands of water plants, with lily-like flowers in full bloom, come floating down the rapid stream. The river is wide and deep, at any rate as far as the town of Guayaquil, some eighty miles from its mouth. Beyond that it gets shallow, and only a small steamer of light draught can go farther up the river. The old town of Guayaquil is the second in importance in the Republic of Ecuador, of which Quito is the capital. The latter city is perched on a plain, about 10,000 feet above the level of the sea, and the roads up to it are so bad, that at certain seasons of the year they are impassable. Guayaquil is an old Spanish town of quaint wooden houses built with arcades, which cover the plank pavement of the streets. This is a great advantage in this equatorial region, where during the rainy season the clouds discharge torrents of water. The place is decidedly unhealthy, and, even in the dry season, the sultry damp heat is depressing and enervating. The *caiman* or alligator thrives along the banks of the river, and the mosquito flourishes to an alarming extent. The former is innocuous so long as he be left alone, but the latter is the plague of the place.

The town has an unwholesome odour about it. There appears to be no drainage whatever, and much of the refuse is left to rot in the streets. A portion is carted away to a spot set apart for the purpose, about a mile distant, and if the wind happens to blow from that direction the air is positively pestilent with the smell of decaying matter, which includes dead donkeys, and garbage of every description. The donkeys are numerous in the town, and are used for carrying everything, from baskets of fruit to carcasses of butchers' meat. In the morning a string of them may be seen trotting through the streets with a load of fresh meat from the slaughter-house, which is situated outside the town. They are all provided with coverings round the fore-legs, like ordinary trousers, and with a protection over the ears against the mosquitoes. Certainly the Guayaquil donkey presents a most ludicrous appearance, as seen in full dress, especially if his garment is embroidered, as it sometimes is. The only people who can stand the mosquitoes, the stench, and the moist heat with impunity are the negroes; and they form the great bulk of the population. Their principal occupation appears to be smoking very damp cigars, but I presume they must occasionally do a day's work.

Very fair tobacco is grown in the neighbourhood, and made into cigars, which are smokable when they get dry. There is also a trade in vegetable ivory, coffee, and gold. But, owing to the insalubrity of the climate,

it can scarcely be said that any trade or industry flourishes, except perhaps the manufacture of the so-called Panama straw hats, which are made in the country round Guayaquil, and brought to the town for sale and export. They are expensive articles even there, an ordinary hat costing from fifteen to twenty dollars, and the finer qualities very much more. But almost everything, except tobacco, is expensive in Guayaquil.

We steamed down the river much more rapidly than we had ascended it, and were out at sea in the course of a few hours. Here we were delayed for a day owing to an accident to the engines, and had the unenviable fate of being rocked by the heavy Pacific swell just on the line, with the prospect of losing the homeward bound mail from Colon. This, however, did not happen, for, owing to the exertions of the engineer, the damage was repaired with expedition, and we reached Panama in time to save the steamer for England. When the ship arrived at Panama it happened to be low water, and we experienced some difficulty in landing. We had to go on shore in small boats, and even then had to be carried through the surf on the backs of negroes, and eventually were jerked down on a beach composed mainly of broken bottles. The Bay of Panama is celebrated for sharks and pearls, but the town only for the former—in the shape of jabbering blacks and half-castes. Nearly every one speaks English more or less imperfectly, and there is an objectionable flavour

of bastard Yankeeism about the place. The "*Grand*" Hotel is a big rambling building, full of bad smells, with an extensive drinking bar, and a roulette table. Most travellers hurry out of the place as quickly as possible. We only remained one night, and the next day, being Sunday, undertook the arduous and unpleasant railway trip across the isthmus. Although the total length of the line from Panama to Colon is only forty-seven and a half miles, it takes five hours to accomplish the journey, and is as unpleasant a bit of railway travelling as can be found in the world.

Accommodation for passengers is totally wanting, and it seems as if the fact that human beings have to be transported on the line has been quite overlooked by the company. At the station at Panama a booking-clerk is established in a little shed about the size of a sentry-box, where he, with exasperating deliberation, fills in a ticket for the traveller, who, panting with heat and almost suffocated by the pressure of other passengers struggling to get up to the desk, has to submit to this ordeal, and pay five pounds for his short journey. Having secured a ticket, the next operation is to have the luggage weighed, which is done on a small set of scales, and as porters are "conspicuous by their absence" this also takes a long time; so that the unhappy traveller is fairly tired out, standing about in the midst of a hustling noisy crowd of "niggers," before he takes

his uncomfortable seat in a dirty, rickety railway car; and, as the train crawls on through the dense tropical forest, he is almost stifled with the hot, dank atmosphere. The road is rough, and the bridges shaky, but a good deal of this is owing to the damage caused by the heavy winter rains.

The train stopped several times on the way, in the middle of little villages of bamboo huts, inhabited by negroes. At these stations there was a great deal of jabbering, and offers of bananas for a consideration. At last, after five dreary hours, we reached Colon, and the passengers bound for Europe lost no time in going on board the Royal Mail Steamer *Moselle*, sailing that day for Plymouth. We did not see much of Colon, nor indeed is there much to notice in a place which has only been brought into existence by a firm of American contractors for the purposes of the railway. Yet this wretched landing-stage is the only spot on the American continent which bears the name of the great discoverer, and even this small tribute to his memory is contested. The next morning the American continent was out of sight, and the mind of the traveller, no longer pre-occupied with the marvellous beauties of nature, the peculiarities of strange races, and the difficulties of travel, reverted with longing to the expectant pleasure of once more gazing on familiar scenes, and looking at well-known and well-loved faces.

The journey home was pleasant and prosperou
result due in no small measure to the courtesy
experience of Captain Jellicoe, commander of the E
Steamship *Moselle*, and his officers.

CHAPTER XVI.

The Events which led to the War.

THE proximate cause of the outbreak of hostilities between Chili and the two neighbouring Republics of Peru and Bolivia was a dispute which arose out of the non-fulfilment of an agreement between Chili and Bolivia as to the division of the taxes levied upon the silver and nitrate of soda mines in the desert of Atacama. But this treaty, and the disputes arising out of it, had their origin in a question of unsettled boundaries—a question which, in all probability, would never have arisen, had not the valuable mineral deposits of the desert been discovered; these, in reality, constitute the apple of discord which nature has thrown between the two countries.

When the Spanish rule was overthrown in South America the different Republics which rose out of the ashes of the lost colonies agreed to accept as their boundaries the limits of the lost provinces. These limits were, in some cases, ill-defined as between Chili and Peru, where the desert of Atacama, then an untrodden waste, had been accepted as the boundary,

without any exact line having been specified. At the time of constituting the Republics a new division of territory was adopted at the suggestion of General Bolivar, and the Republic of Bolivia was brought into existence. It consisted mainly of table-land in the interior, and at considerable altitude, but a portion of the then valueless desert of Atacama was also allotted to the new State, in order to secure to it some length of coast-line. The line of division between Bolivia and Chili was not defined with exactitude at the time, and never required to be so by either State until the value of the guano found along the coast of Peru was ascertained. Then both Chili and Bolivia put forth their respective claims to the coast-line of Atacama, where further deposits were presumed to exist. Up to this date very little attention was paid to the exact limits of jurisdiction between the two countries over a territory considered valueless and unproductive. The town of Cobija had always been Bolivian, and was in fact the only port they used. It is situated between the 22nd and 23rd degrees of south latitude. Chili claimed jurisdiction over the territory south of the 23rd degree. Bolivia never laid claim to the country south of Cobija, which is described as "the only port of the country," in a Message of the President, General Santa Cruz, as late as the year 1833. According to Spanish documents the boundary line has been variously fixed at the 22nd parallel, at the 23rd, and at 24.30. The desert

seemed to be accepted as the boundary by the early Governments of the new Republic of Chili, for the Constitution promulgated in 1833 thus defines the limits of the country in the first clause :—

"The territory of Chili shall extend from the desert of Atacama to Cape Horn, and from the Cordillera of the Andes to the Pacific Ocean, including the Archipelago of Chiloe, all the adjacent islands, and that of Juan Fernandez."

But in 1842 the President of the Republic of Chili announced to the Legislature in a Message, that he had sent an expedition "to examine the coast lying between the port of Coquimbo and the Bay of Mejillones, with the object of ascertaining whether, in the territory of the Republic, any guano existed."

The Bolivian Government, on their side, were not slow in laying claim to this waste land, hitherto regarded as valueless, and the two Republics were soon engaged in a controversy about the exact line of boundary. The events of 1864 tended to hasten a settlement between the two disputants, and, after much diplomatic correspondence, it was decided, and agreed by treaty signed in 1866, between Chili and Bolivia, that the boundary line should be fixed at the 24th degree south, and, at the same time, that the territory lying between the 23rd and 25th degree south latitude should be considered as joint property between the two Republics. The revenue to be derived from the taxes

on the working of the mines, and the deposits of guano and nitrate, were to be equally divided between the two countries, and Bolivia was to be entrusted with the duty of collection, subject to a right of supervision by Chili. Disputes about the collection and the division of the taxes soon arose, and ended in a refusal on the part of Bolivia to refund any of the moneys collected. An agreement was entered into, after more diplomatic correspondence, in 1872, by which Chili renounced, not only the amount claimed by her, but all future income to be derived from the joint territory, on condition of receiving guarantees for the safety of the Chilian subjects and capital engaged in the working of the mines. It so happened that nearly all the mines were worked by Chilian subjects, and with capital subscribed by residents in Chili.

In 1874 this agreement was formally ratified by treaty, the fifth clause of which provides that "the export duties which shall be imposed on the minerals of the territorial zone under consideration shall never exceed the amount actually levied, and the Chilian persons, their works, or their capital, shall never be subject to any other rates or taxes than those imposed at the time of the signing of the treaty." This treaty was signed and ratified in due form, but it was not carried out; for Bolivia soon commenced levying municipal taxes on the Chilian residents, and eventually, in direct contravention of the fifth clause, imposed a

fiscal duty on the Antafagasta nitrate works belonging to a company formed and existing in Chili. The remonstrances of the Chilian Government were ineffectual in persuading the Bolivians to keep to their engagements. Every effort was used to bring the matter to an amicable solution, and even arbitration was proposed, and refused by Bolivia, which State at length took a high hand in the matter, and issued a decree depriving the Antafagasta Company of its concession for working the nitrate deposits. While Bolivia was thus acting in defiance of its own engagements, new discoveries of nitrate were made, and the production continued to increase. The Peruvian Government, fearing the competition of these new discoveries, endeavoured to restrict the development of the output of nitrate from the Bolivian and Chilian deposits as much as possible. In 1873 the Peruvian Government passed a decree fixing the output of nitrate from their mines at not more than four and a half millions of *quintals*, and made proposals both to the Chilian and Bolivian Governments to enter into an agreement for the restriction of the trade in the mines under their authority, either by direct orders or by imposing a heavy export duty. These proposals Chili would not accept, and Bolivia could not, under her agreement, increase the duty on the produce of mines belonging to and worked by Chilian subjects.

It so happened that not only the great majority of

the mines and nitrate deposits were owned by Chilians, but that nearly all the miners and labourers were Chilian subjects. It was at this time, namely, in 1873, that the Peruvian Government entered into a secret treaty with that of Bolivia, uniting their interests against those of Chili. When the differences between Chili and Bolivia culminated in the Antafagasta incident, no suspicion was entertained at Santiago of any secret alliance; and the mediation of Peru in the matter was accepted as *boná fide*, and a special envoy received in all sincerity. However, rumours of the secret treaty began to circulate, and at last the Chilian Government became suspicious, in spite of the protestations of the Government at Lima, and their special envoy at Santiago. Their suspicions were also aroused by the fact that for some time the Peruvian Government had been very considerably augmenting the military forces of the country. The standing army had been increased, several new men-of-war added to the fleet, and great quantities of arms and military stores purchased. The Chilian Government, becoming alarmed at these preparations, demanded categorically a declaration of neutrality from the Peruvians. It was no longer possible for the latter to evade the admission of the secret alliance with Bolivia, and they had in reply to declare that they could not remain neutral, in case of an outbreak of hostilities between Chili and Bolivia, on account of the treaty with

the latter country. This revelation produced a profound feeling of indignation and exasperation among the people of Chili, and the Government had no other course open to it but to declare war against both Peru and Bolivia; and, on the 5th of February, 1879, the friendly relations between the countries were suspended.

From the few facts thus summarized it may be assumed that the conduct of Peru in its hostility to Chili has been dictated by the fear of competition arising out of the discoveries of guano and nitrate of soda in the desert, which might lessen the value of her own rich deposits in the North. Until within the last ten or fifteen years Peru had been the sole possessor of these valuable products, the export duty or monopoly of which constituted the principal income of the spendthrift Government of Lima. A reduction in the price, following on a sudden increase of the production, would reduce the revenue, and place Peru in a position of difficulty with the lessees or concessionaires from whom advances had been obtained, as well as with the foreign bondholders, who had accepted these deposits as security, in the somewhat ingenuous belief that products of this nature were not to be discovered in any other part of the world. The Peruvian Government naturally endeavoured to throttle the rising competition of the South, and failing to lure Chili into an agreement for restricting the quantities to be produced

at each mine, or to impose prohibitive duties, they turned to Bolivia and found there an easy and willing dupe. It appears also pretty clearly that Bolivia was to be used as a cat's-paw to draw the roasted chestnuts out of the Chili fire for the benefit of Peru. Probably the latter never expected that the heat of the South would turn into such a volcanic outburst as poured out of Chili when the war was decided on.

CHAPTER XVII.

Short Account of the War from the Commencement up to the Blockade of Callao.

As soon as the war was declared, on the 5th February, the Chilian Government lost no time in sending some men-of-war along the coast of Peru to prevent the shipment of guano and nitrate. In many of the ports the Chilians found no armed force to resist them, and they at once destroyed all the barges used for shipment. These barges are a necessity along the coast where vessels lie at some distance from the shore and have to take in cargoes by transhipment. In other places, such as Pisagua, Mollendo, and Mejillones, the Chilians were opposed by the fire of riflemen, and they then bombarded the defended towns, a proceeding which drew forth loud protests from Peru, who claimed that notice ought to have been given to enable strangers and non-combatants to retire. While the fleet of the Chilian Government was thus engaged in destroying the barges along the Peruvian coast, and putting a stoppage to all trade, the Government of Bolivia ordered the seizure of the mines and properties at Corocoro belonging to a Chilian company, and among other

matters took possession of some forty thousand *quintals* of copper, which they immediately sold. A little later a decree was passed sequestrating all property belonging to Chilian subjects, and ordering the latter to leave the country within ten days. The same course was pursued by the Peruvian Government, who expelled all Chilian subjects from the country within the space of eight days, a term which was even shortened in some instances by the perversity of local officials, and some unhappy Chilians were cast into prison for want of means at the time to leave the country. At Iquique the time allowed to Chilians to leave the town was only two hours, and considering the very large number of Chilian workmen employed at the nitrate works and mines, the execution of this unnecessarily harsh order would have led to much misery, and, perhaps loss of life, if the United States and British men-of-war then lying in the port had not come to the assistance of the fugitives and taken them off in their boats. The war from the very commencement was characterized by great malignity on both sides, although it must be said to the honour of Chili, that the Peruvians and Bolivians resident in that country were not expelled after the outbreak of the war, nor any of their property sequestrated, and they continued to reside there and follow their usual avocations without let or hindrance. Moreover, the property of private individuals on that portion of the enemy's territory

conquered by the Chilian forces was respected as much as possible under the circumstances.

Fearing, doubtless, reprisals on the part of the Chilians for the harsh expulsion of their compatriots from Peruvian territory, the Government of the latter country entered into an engagement with the Pacific Steam Company to carry all Peruvian subjects back to their country, charging the Government at Lima with the cost of passage for those unable to pay.

Soon after the declaration of war, namely, on the 12th of February, a naval engagement took place off the coast, near the outfall of the River Loa, between the two Peruvian ironclads *Union* and *Pilcomayo*, and the Chilian gunboat *Magellanes*. After sustaining the combat for an hour the latter managed to effect her escape to the South. This was claimed at Lima as a victory; but it could hardly be considered as such, seeing that two powerful ironclads, one with thirteen and the other with six Armstrong guns, were pitted against a small gunboat with only three guns. It was to be expected that hostilities would commence with a naval engagement, as both the countries were in possession of fine ships; moreover, owing to the desert of Atacama, which lay between the belligerents like an almost impassable barrier, it was deemed impossible to bring the armies into early action. Both nations dreaded crossing this rainless, sterile territory. The Peruvian-Bolivian army occupied certain towns in the North, near the

frontier of Peru, and having access by railways or roads to the sea-coast. The Chilians were not in a position to advance any force at first, as their army in time of peace consists of only a few thousand troops, mainly employed in guarding the southern frontier against the turbulent outbreaks of the Indian tribes. The Government had, therefore, to call out the reserves, and appeal to the people to arm. This appeal was answered in a manner which does honour to the patriotic spirit of the nation. From every part of the country came volunteers with alacrity and enthusiasm, and in an incredibly short time an army of twenty thousand men were armed and ready to take the field. They were not drilled or much skilled in the art of warfare, but they were imbued with great spirit and patriotism, and, owing to the Indian blood which flows in the veins of the Chilian peon, the men were likely to prove good fighting material. The Government received addresses from the centres of commerce, such as Valparaiso, signed by merchants of position, expressing their readiness to submit to any special taxation which the Government might deem necessary. Private hospitals for the wounded were organized in several towns, more especially Santiago, where the ladies devoted themselves, with praiseworthy zeal, to preparations for the tending and nursing of the wounded. Subscription lists were opened throughout the country, and every one contributed his quota, however modest, to the

great national fund. While the army was being collected and formed, the Chilian ships, in the month of March, took peaceable possession of Antafagasta, Mejillones, and the rich mineral deposits of Caracoles, and without delay appointed prefects and subordinate officials to conduct the administration of these districts in the name of the Chilian Government.

Antafagasta was taken by the Chilians without any resistance; in fact, they were received by the inhabitants with open arms. This was not to be wondered at, as the population of the desert of Atacama was composed almost entirely of Chilian subjects. As a writer in the "XIX$^{\text{ième}}$ Siècle" said, "Out of twenty inhabitants seventeen were Chilians, one Peruvian, one European, and the twentieth a Bolivian Colonel, who represented the authorities and Government."

For some weeks after the engagement between the *Magellanes* and the Peruvian ironclads operations at sea were confined to cruising along the coast and blockading the Bolivian ports, while on shore the Peruvian Government were busy levying troops and collecting money. A war tax of four dollars per half-year, for every man between the ages of twenty-one and sixty years resident on the coast, and of three dollars for those residing in the interior, was imposed, an increase of fifty per cent. on all duties was decreed, and the export of gold or silver prohibited. The Peruvian ports were closed against traders from

Chili, and no vessel having previously touched at a port of the latter country was allowed to enter. Meantime the Chilian fleet had taken possession of the coast as far as Iquique, which was blockaded. The two opposing Powers were at this time gathering their strength for some great effort, but hostilities were in abeyance, and both seemed afraid to move. At last, on the 16th of May, the Chilian fleet at Iquique steamed to the North, leaving only two vessels to keep the blockade, namely, the *Esmeralda*, an old wooden corvette carrying fourteen guns, and the *Covadonga*, a gunboat with two seventy-pounders.

It so happened that about the same time, namely, on the 14th May, the Peruvian fleet left Callao for the South, carrying General Prodo and his staff, as well as munitions of war to Pisagua. The *Huascar* and *Independencia* left the fleet at the latter port and continued the voyage to the South. The Chilian fleet never sighted the enemy, and went on to Callao. On the 21st of May, the *Huascar* and *Independencia* reached Iquique, and finding only two ships of smaller power in the harbour forthwith attacked them. The action commenced at eight in the morning, when the *Huascar* at once engaged the *Esmeralda*, and the *Independencia* attacked the *Covadonga*. The latter vessel could barely hold her own against the *Independencia*, a corvette carrying twelve seventy-pounders, and her main endeavour was to escape to the South, which she did, after sustaining the fight for four hours.

She was chased by the *Independencia*, and her commander, rightly judging that safety would be found in hugging the shore and keeping in shallow water, made for the coast, closely followed by the *Independencia*, until off Genesco Point, about twelve miles south of Iquique, where the Peruvian vessel struck the shoal and rocky bottom. The *Covadonga* then turned her guns on the helpless ship and forced her to strike her colours. The *Huascar*, however, having ended her conflict with the *Esmeralda*, steamed up to the rescue of her disabled companion, and the *Covadonga* made the best of her way south, where she was fortunate in meeting the *Rimac* and was towed into Antafagasta. The fate of the *Esmeralda*, meantime, had been decided. In presence of the powerful 300-pounders of the *Huascar* this unfortunate wooden ship had no chance, and the resistance offered by her officers and crew was that of patriots and heroes determined rather to die than surrender. To make matters worse, one of her boilers burst at the beginning of the action, and she became practically unmanageable. She drifted to within 200 yards of the shore, and was then exposed not only to the fire of the *Huascar's* guns, but also to that of the shore batteries and the riflemen. She was literally riddled with shot, and even set on fire by a shell. Still, her valiant commander would not surrender, prepared rather to blow up his powder magazine than strike his flag. About an hour after the commencement of the fight

the *Huascar* determined to ram her antagonist, and struck her in the bows. It was then that Don Arturo Pratt, commander of the *Esmeralda*, jumped on the deck of the *Huascar*, giving the order to board. His men had not time to follow their gallant leader, for the ram was disengaged and the ships parted with great rapidity, so that Captain Pratt found himself on the enemy's deck with only one companion. He made a rush at the helm and shot the man in charge, but was himself immediately despatched. The first lieutenant of the *Esmeralda* now took command of the almost disabled ship, which was soon rammed again, when Lieutenant Serrano and about a dozen men boarded the *Huascar*, and sold their lives dearly on the enemy's deck. The *Esmeralda* was now in a most deplorable condition. The engine was disabled, the powder magazine flooded, the hull pierced in many places, and the deck encumbered with the dead and dying. Yet the crew summoned courage to receive the *Huascar* with a last volley when she again rammed, and after that the ship sank with the national colours nailed to the masthead. Most of the crew, to the number of 200, were either killed or drowned, and the boats of the *Huascar* saved fifty after the ship went down.

The account of this gallant engagement sent a thrill of patriotic enthusiasm through the length and breadth of Chili. The news reached Santiago on the evening of the 23rd, and during the night the church bells were

ringing, and patriotic speeches were delivered in praise of the heroic commander and crews of the Chilian ship. Don Arturo Pratt of the *Esmeralda* was held up as a hero equal to any who had ever lived at any time and in any country. On the 25th of April a solemn *Te Deum* was celebrated in the cathedral, to which the President and Ministers went in state, accompanied by a long procession, and all the troops then in the capital.

The example of the capital was followed by many towns, and meetings in honour of Pratt and his companions were held in all parts of the country. The effect of the battle was to infuse an extraordinary amount of enthusiasm amongst all ranks of society, and volunteering became general. But no immediate action followed on either side. The *Huascar* became the mistress almost of the whole seaboard. Her heavy armament rendered her secure against attacks from the lighter Chilian vessels, and she skilfully eluded, under the command of her captain, Don Michael Grau, any engagement with the Chilian ironclads. These found it impossible to come within firing distance of the Peruvian ironclad, as she possessed far greater speed, and was, moreover, most prudently handled—so that, while becoming the terror of the coast, she seemed herself as invulnerable as a phantom ship. She endeavoured to catch the smaller craft of the Chilian navy, and on the 9th of June did actually attack the *Magallanes* off Antafagasta, but the ironclad *Almirante*

Cochrane coming up in time, she adopted her usual strategic movement. She was more successful with the Chilian transport *Rimac*, carrying munitions of war, fifteen officers, 258 men, and 215 horses, capturing the ship and taking the troops on board as prisoners. The fortunes of war at this time seemed to be against the Chilian arms, and a feeling of apprehension spread among the population. The Government was openly accused of inaction, changes were made in the Ministry, much was written, more was said, but nothing was done. Yet one very necessary thing was attended to, namely, the two ironclads had their hulls cleared of the weeds and dirt which impeded their speed, and had their machinery and boilers overhauled. Early in October the whole Chili fleet again put out to sea, and steamed to Arica in search of the *Huascar*. Not sighting the enemy, they returned to Mejillones, where one squadron composed of the *Cochrane*, *O'Higgins*, and *Loa* remained cruising about, while the *Blanco Encalada*, *Covadonga*, and *Matias Cousiño* followed a southern course. The *Huascar* and *Union*, then cruising between Antafagasta and Coquimbo, gave this squadron a wide berth, and made for the North with all speed. But this time the Peruvian ships were caught in the trap, and fell in with the Chilian vessels not far from Mejillones. The *Union* managed to escape, and made for the North at full speed, followed by the *O'Higgins* and *Loa*. The

Cochrane barred the way for the *Huascar*, and the latter, finding escape impossible, had to engage in what may be described as a fierce and desperate duel between two men-of-war of modern construction, protected by massive iron plates, worked by perfected machinery, and armed with terribly powerful guns. Both ships carried 300-pounders, but the armour-plating of the *Cochrane* was stronger, and she was a larger and more powerful ship. This combat will for ever be memorable as almost the first great fight between ships of modern construction. The *Huascar* began the engagement by sending a shot at the *Cochrane* from a distance of 3,000 yards. The latter, however, did not answer until she had come within a cable's length, and then opened a murderous fire on the Peruvian ship off Point Angamos. Her fourth shell hit the commander's turret, exploding, and blowing the turret and the commander, Admiral Grau, into the air. The command had scarcely been taken by the next officer in rank when a shot carried his head off. The firing of the *Cochrane* was terribly exact. The *Huascar* received twenty shots, two of which penetrated the gun turret and disabled both guns, one shot hitting the starboard gun and making an indentation of four inches, which I myself measured some time afterwards. At 10.25, just an hour after the first shot had been fired, the *Huascar* lowered her flag, but only for a moment, for it was almost immediately hoisted again.

The firing from both the *Cochrane* and the *Blanco Encalada*, which had joined the combat, recommenced, and the panic which had seized the crew of the *Huascar* induced many of them to jump into the water through the port holes. The then commander of the ship, Lieutenant Garezon, stood, revolver in hand, at the mast, to prevent his terrified crew from striking the flag, preferring to sink the ship rather than surrender; but he had to leave the deck for the engine-room and the opportunity was seized, and the flag lowered. But still the ship continued to move, followed by the Chilian ironclads, until at 10.55 the engines stopped just as the *Blanco Encalada* had fired the last shot of the action. The result of the fight in killed and wounded was severe. The *Huascar* lost her commander, Admiral Grau, the second in command, Captain Aquirre, two lieutenants, and thirty-eight men, besides 162 prisoners. The consequences of the issue of the combat were most serious in the history of the war. The littoral, now freed from the domination of the redoubtable ironclad, was open to further operations on the part of Chili, while the loss of such a ship and such a commander was an almost fatal blow to the Peruvian prospects. Grau had commanded his ship with great ability, had acted uniformly with consideration and fairness towards his enemies, and died like a hero. The Chilian ironclad was but little damaged, as most of the shot from the *Huascar* glanced off her heavily-plated

sides. She lost ten men owing to a shell from her own companion, the *Blanco Encalada*, fired at close quarters at the *Huascar*, but which struck the *Cochrane*.

The news of this victory was received with intense satisfaction in Chili. The whole country was jubilant, thanksgivings, public rejoicings, triumphal processions, and patriotic demonstrations were held throughout the Republic. Indeed, the importance of the success to Chili could not well be exaggerated. The seaboard was now free, and the Chilian army enabled to invade the enemy's country. The prestige of the Peruvian fleet was lost with the capture of their finest ship and the death of their most able seaman. The time for decided action had arrived, and the Chilian commanders were not long in seizing the opportunity. A few days after the battle of Angamos a fleet of transports left Valparaiso with troops destined for Pisagua. They reached this place on the 2nd of November, and at once commenced a landing. The little town of Pisagua is situated on a narrow ledge of ground at the bottom of steep hills, which rise to a height of 1,125 feet above the level of the sea. The heights were occupied by the united Peruvian and Bolivian army, who poured a murderous fire down on the assailing Chilians. The landing of the latter was effected at 10.45 in the morning, and such was the impetuosity of the troops, and their indomitable bravery, that in less than an hour they had gained the heights and engaged in a hand-to-

hand conflict with the enemy. The fight was fierce though short along the edge of the precipitous declivity, down which the bodies of the dead and the wounded of both armies rolled in ghastly confusion. The allied army, though more numerous, and in a good position, had to give way before the determined attack of the Chilians, who remained masters of the situation. It is recorded that this was a "soldiers'" victory, that the men rushed at the enemy with wild impetuosity unheeding the commands of their officers, who foresaw the danger of a breathless mob attacking the intrenched army on the heights, even if these were successfully stormed. But Chilian valour overcame all obstacles, and so excited and elated were the men after their victory, that they continued firing off their rifles even after the enemy had retreated, to the great danger of their comrades. Order and discipline were restored with some trouble, and the Chilian army encamped on the plain recently held by the Peruvians. While the army was thus securing the heights, the fleet bombarded the town so effectually, that it may be said with truth that nearly every building was rased to the ground, except the English Vice-Consul's house, which escaped under the protection of the British flag.

From Pisagua a railway runs up the hill-side by a series of zigzag inclines, and then continues to the nitrate deposits of the interior. The first movement of the Chilians was to seize this line of communication,

and advance into the country as far as the end of the railway. They established their head-quarters at Dolores, some miles from the terminal point, where water is found, and remained there in the expectation of an attack. After the battle of Pisagua the Peruvian force stationed at Iquique marched out on the 5th of November to reinforce the allied army, and having effected a junction the whole force marched on Dolores to dislodge the Chilians. This march is described as one of terrible sufferings. The troops had to pass through the desert under a broiling sun, in the midst of mineral dust, dry and irritating, without water and without provisions. The last march was one of sixteen hours, and so exhausted and weary were the men that they had to be urged to the attack, and encouraged by the prospect of seizing the stores of the Chilians; the starving men fought like wild animals for the food they expected to find in the Chilian camp. But the fortunes of war were against them, and after a most desperate battle night set in, leaving the Chilians still in their positions, although they had to resist an attack of some ten to eleven thousand men, with a force of less than six thousand. When daylight broke it was found that the allied army was in retreat, and nothing was seen of them but the distant clouds of dust they raised along the line of their march. The loss on both sides was considerable; the allies lost about 2,000 men in killed, wounded, and prisoners; and

the Chilians about half as many in killed and wounded.

A large quantity of ammunition and the whole of the enemy's artillery, abandoned in what appears to have been a panic, fell into the hands of the Chilians. The victory was followed up by an attack on Tarapaca, a town situated in the centre of the desert, and which was carried on the 27th November, after a hard-fought battle on both sides. The Chilians were now in possession of the whole province of Tarapaca, that is to say, the entire desert of Atacama. Further advance in the direction of the North was, however, impossible, owing to the almost insuperable difficulty of conveying the necessary supplies for an army of several thousand men. It became, therefore, advisable to make another advance by sea. Meantime, Iquique had been surrendered to the Chilians without a shot having been fired. On the 27th of November, the day on which the battle of Tarapaca was fought, the authorities of the town surrendered their guardianship into the hands of the foreign resident consuls, and these, rather embarrassed with the responsibility, formally placed the custody of the town in the hands of the officer commanding the blockading Chilian fleet, Captain Latorre of the *Cochrane*, who at once appointed one of his officers Prefect and Harbourmaster, and landed a body of marines to take possession of the place.

By this surrender the whole of the Bolivian sea-

coast, and part of the Peruvian coast as far as Pisagua, fell into the hands of the Chilian forces.

These successes were at once followed up by the advance of the fleet further north, and the blockade of Mollendo and Arica, which took place before the end of the year. No actively offensive operations, however, either by sea or land, were resumed for some months, during which time the Chilian navy was concentrated at Pisagua, as well as strong reinforcements of troops of all arms. At the end of February, 1880, the Chilian forces were still at Pisagua, but preparations had then been made for a further advance, and on the 8th of March a descent was made on Mollendo. The ironclad *Blanco Encalada* landed a force of 2,000 men at Islay, close to the town of Mollendo, which was occupied the next day without resistance. The Chilians did much damage to the railway and the Custom House, destroyed all the barges in the port, and even burnt the church. After this exploit they re-embarked on the 13th, and a descent was made on Ilo, whence a railway runs inland to Moquequa. This place was taken after a severe fight on the 20th March, and the Chilian troops then marched southwards in the direction of Tacna and Arica. They reached Sorata on the 27th March, and then commenced a march of great difficulty across an enemy's country, devoid of provisions, and under the broiling sun of summer. After great privations and sufferings they reached the River Samos, and engaged

the Peruvian army, which they defeated, occupying Tacna at the end of May, and Arica on the 7th of June.

Meantime, the blockade of the ports of Arica and Mollendo continued without incident, except, on one occasion, when the Peruvian corvette *Union* forced the blockade of Arica on the 17th March, and landed a quantity of stores and war material under protection of the fortresses, and within sight of the blockading squadron. She then cleverly gave them the slip at night, steaming slowly towards the south, while the squadron were watching the northern exit. On getting as far as Pisagua she steered out to sea, and succeeded eventually in reaching Callao after a long journey round. The Chilian Admiral soon after this event sailed north with his squadron, and reaching Callao announced his intention of blockading the port, giving foreign vessels ten days from the 10th of April to leave the harbour.

On the 22nd the bombardment of the place commenced, and considerable damage was done to the town, the shipping, and the people. On the other hand, the Chilian transport *Loa* was sunk by a Peruvian torpedo, disguised as a fruit boat, and 150 men out of a crew of 190 were lost.

In the midst of these stirring events, and great successes for the Chilian arms, occurred the death of Sotomayor, the Minister of War, who had elected to

remain with the forces in constant and anxious consultation with the naval and military commanders. His death is recorded as having taken place on the 20th of May, and in him Chili lost one of her most devoted and self-sacrificing sons. It is perhaps debatable whether a Minister of State can be of more service at the scene of action than in his department at the capital; but there can be no question as to the motives of conscientious devotion to duty which induced Senor Sotomayor to accompany the forces in the field.

Since the spring of the year many events of importance have taken place, but this unjustifiable and fratricidal war has not yet ended. Hopes were entertained that long before this hostilities would have ceased and a peace have been effected through the mediation of other Powers. But these hopes have not been realized. As matters stand now, the probabilities are that Chili will be victorious, and if so, she will demand, with justice, a heavy indemnity from her enemies. Her frontier line will be definitively fixed and placed so as to include the desert of Atacama, with its incalculable riches in silver and nitrate. Bolivia will possibly be obliterated altogether, and divided between her neighbours, Peru, Brazil, and Chili. But it is not possible to prophesy the end of a war which still continues.

Every one must, however, deplore the infatuation

which has urged the northern Republics to a fight detrimental to all, and which has for sorry excuse a question of revenue, that could easily, and in fact properly, have been settled by arbitration.

CHAPTER XVIII.

Some Statistics and General Notes about Chili.

THE Republic of Chili occupies the southern extremity of the west coast of South America, and consists of a narrow strip of land, varying in width from 40 to 200 English miles. It is bounded on the east by the Cordillera of the Andes, and on the west by the Pacific Ocean, and extends northward up to the twenty-fourth parallel south, and southward to Cape Horn. Chili also claims and holds the Straits of Magellan to the Atlantic Ocean.

The land of Chili was first sighted by the Portuguese navigator Magellanes, when, holding a commission under the King of Spain, in 1520 he discovered the passage through the Straits which now bear his name, and passed through them from the Atlantic to the Pacific Ocean. He was the first European who landed on Chilian soil, namely, at the island of Chiloe, soon after his memorable discovery of the Straits. Magellan doubled Cape Virgins, which he christened the Cape of the Eleven Thousand Virgins in honour of Saint Ursula, on the 21st of October, and entered the Straits on the first day of November, 1520. On the 28th of the

same month he sailed into the Pacific Ocean, and turned to the north along the coast of Chili as far as the thirty-second parallel south, where he altered his course to the west in search of the Spice Islands. He and his crew were, therefore, the first Europeans who visited the land of Chili. But he seems not to have in any way laid claim to this land, any more than to Patagonia, where he landed and passed the winter of 1519-1520, and to which he gave the name it now bears, from the large feet of the gigantic savages who inhabit the land. The first impression of the size of the Patagonians was, however, erroneous, and the survivors of the expedition carried home an exaggerated account of them, which was accepted as truthful for a long period. Magellanes himself did not return to Europe, but was killed in a fray with the natives of one of the Philippine Islands, in 1521.

No further attempts were made by Europeans to visit this part of the South American continent until 1535, after the conquest of Peru by Pizarro. In 1534, Almagro, who was joined with Pizarro in his great expedition, was empowered by the Emperor Charles to discover and occupy the country for 200 leagues south of the territory conquered by Pizarro. Accordingly he started in 1535, with an army composed of 570 Spanish and 15,000 Peruvian troops, the latter under the command of the brother of the Inca Manco Capac. The country to the south had previously been invaded by

the Peruvians, under the Inca Yupanqui, in 1440, and was held by them as far south as the River Maule. But their sway was more that of protectors than conquerors. They introduced their laws, and levied a tribute, but governed with a lenient hand. They never penetrated south of the River Maule, and the aborigines who had submitted to them lived in peace and contentment, complying readily with the mild and equitable laws of the Inca's Government.

Almagro's expedition was not successful. On his march across the Cordillera from Cuzco to Copiapo, performed during the winter months, he lost 150 Spaniards, and 10,000 Peruvians. He advanced as far as the River Claro, where the Promancian Indians made a strong stand, and forced him to retreat. He returned to Cuzco in 1538, having in reality done little more than declare the country annexed to the empire of his master, Charles V., in vain and pompous language. When Almagro returned to Cuzco he headed a revolt against the Pizarros, in which he was defeated, taken and executed. Two years after his death, namely, in 1540, Don Pedro Valdivia was entrusted with a fresh expedition to Chili. He followed the same road as Almagro, but chose a more genial time of the year, and arrived at Copiapo with little loss. He soon advanced and reached the fertile banks of the Maipu, where he founded the town of Santiago in 1542, and penetrated into the land of the Araucanians, with whom he had many battles, and

by whom he was put to death in 1553. He was succeeded as Governor of Chili by Don Garcia de Hurtado, who was, as well as all subsequent governors, appointed by the Viceroys of Peru, until the year 1810, when a revolution broke out in Chili against the Spanish Government, in which Don Bernardo O'Higgins, son of one of the last viceroys of Peru, but a native of Chili, played a conspicuous part, and became the first Dictator of the new Republic. The conflict between the Spanish troops and the new Republican army continued until 1826, when peace was definitely agreed to, and the small Republic left to govern itself. Since that time the country has prospered in a marvellous manner.

The first President, elected in 1826, under the new constitution, was General Blanco Encalada, and he was succeeded by presidents holding an uncertain tenure of office until 1847, when General Bulnes was elected for a term of five years, at the end of which he was again re-elected for the same period. From 1851 down to the present day, civilians only have been elected to the post of President of the Republic, each one governing for two terms of office until, in 1871, the Cortes passed a law prohibiting the re-election of a President for a second term of office immediately following the one just ended. The development of the country has rapidly taken place under the rule of these peaceful Presidents. The rich mineral wealth has been discovered and developed, railways have been constructed, new towns built,

colonies planted, enormous tracts of land brought under cultivation, and the population nearly doubled.

When the Spaniards first occupied the country in the middle of the sixteenth century, they found the northern part inhabited by tribes of Indians, who had for eighty years been living under the mild and civilizing rule of the Incas, and who did not seriously oppose the advance of the invaders; but in the south they encountered the Araucanians, who offered them a determined resistance, and who, to this day, defy the Spaniards in the fastnesses of the Cordilleras, around the old Spanish settlement of Villa Rica. At present, with the exception of this territory, inhabited by about 60,000 free Indians, the races have become fused in the country, and Spanish is the only language spoken.

According to the last census, taken in 1875, the population of the Republic amounted to 2,075,971, consisting of 1,033,974 men, and 1,041,997 women.

O these, 26,635 are foreigners, classified according to nationalities and sex, as follows:—

Europeans.	Men.	Women.
Germans	3,143	1,535
English	3,459	808
French	2,408	906
Spaniards	1,102	121
Italians	1,724	259
Other Europeans	1,211	199
Total Europeans	13,047	3,828

Americans and Others.				Men.	Women.
Argentines	..	...	...	4,589	2,823
Peruvians	..	..	...	479	361
North Americans	..	..	...	221	119
Other Americans	..	..	...	479	209
Asiatics, &c.	...	...	...	132	4
Total Americans and others			...	6,453	3,307

This is but a small population for the area of the land, and represents seven persons per square mile. The population is increasing. In 1835 it was 1,010,332; in 1851 1,429,120, and it is now over two millions. The descendants of old Spanish settlers are estimated at 300,000, and the rest of the population is of mixed descent, that is, of Spanish and Indian blood.

The Government of the country is representative. The Executive consists of a President elected by vote, assisted by a responsible ministry; and the Legislature is composed of a congress of two chambers, both elected. The members of the Lower House, or Deputies, are elected by the provinces in the proportion of one member for every 20,000 inhabitants. The Senators are also elected, but in the proportion of one for every five Deputies. Justice is administered by a high court of national jurisdiction; a high court of appeal for the three great divisions, north, central and south; thirty-eight courts of justice, civil and criminal; and four for purely criminal cases.

The Church, which is the Roman Catholic, is supported by the State, and is under the control of an archbishop and three bishops. Religious liberty, however, is allowed by the law of the land. Public education is also supported by Government, who expend upwards of a million dollars per annum, or about half-a-dollar per inhabitant, on the university and public schools.

In 1878 there were 876 students at the university at Santiago, and 3,384 pupils at the Lyceums or middle class schools. No less than 778 primary schools are scattered over the country, with 1,053 teachers and 60,571 children. In spite of these efforts to educate the people, more than 659,422 persons are returned as unable to read or write.

The income of the State amounts to about 14½ millions of dollars, and is derived principally from the Customs, 6 millions; the railways, 3½ millions; monopolies, nearly 2 millions; land-tax, 1 million, and other sources.

The expenditure consists mainly in payment of interest on foreign debt, 6½ millions of dollars; army and navy, 2 millions; telegraph and post-office, 3½ millions; public instruction, 1 million; and sundry other items, which bring it up to 16 millions of dollars, thus leaving a small deficit.

The public debt stood as follows in July, 1879 :—

[illegible]	$19,320,550
[illegible]	5,349,442
[illegible]	14,579,000
	$39,248,992

The foreign debt was contracted in order to construct the railways. There are now open for traffic 540 miles of main line, and 74 miles of branch lines, which cost $39,558,477, and in which in the year 1878, the gross receipts amounted to $3,111,369, and the working expenses to $1,970,467, leaving a clear profit of $1,140,902, or about 3 per cent. on the capital invested.

The prosperity of the country may be judged from the following table of the value of the exports in 1878, published under the authority of the Government:—

Mineral Products	$17,325,366
Agricultural Products	3,673,561
Manufactured Goods	229,463
Miscellaneous	65,393
National Coin	3,230,910
Foreign Coin in Circulation	163,626
Bank Notes	914,500
Articles Imported and Exported	892,540
	$31,695,359

The mineral products consist principally of copper and silver ores, although some gold is also found. The agricultural produce is mainly corn, of which the yield in 1878 was about 10 millions of English bushels. The extent of arable land is estimated at 20 millions of

acres, of which only $2\frac{1}{2}$ millions, or $7\frac{3}{4}$ per cent., is actually under cultivation.

The imports include articles of food, textile fabrics, machinery, clothes, jewels, &c., and amounted in 1878 to a value of $25,322,011.

The topography of Chili is such as to result in great variation of climate. The range of the country, from the 23rd parallel south to the 50th, includes every variation of temperature, from an almost tropical heat to a nearly glacial cold. In the desert of Atacama the heat in summer reaches 120° Fahr., and in Terra del Fuego it scarcely rises above freezing point. Owing to the configuration of the mountain ranges, which run north and south, the currents of air almost constantly flow from south to north, bringing with them a cooling influence. Moreover, at night there is always a cold draught from the snow region of the Andes, so that, however hot it may be in the day, the evenings are cool. The average temperature at Caldera is 65°; at Copiapo, 70°; at Valparaiso, 70°; at Conception, 56°; at Valdivia, 52°; and at Punta Arenas, in the Straits, 45°. The variations of temperature are therefore considerable. Great differences also exist in the rainfall in the different districts, as may be seen from the following table, showing the average fall during the year in various localities, commencing with the North, or rainless region:—

Atacama	Nil.
Copiapo	0·32 inches.

La Serena	—	..	—	—	14 inches.
Santiago	..	..	—	—	11 ,,
Talca	..	..	—	—	21 ,,
Valdivia	..	..	—	—	102 ,,
Arauco	..	..	—	—	52 ,,
Puerto Montt	..	—	—	—	90 ,,

This great variation of humidity naturally has a strong influence on the vegetation.

Whereas in the desert not a blade of grass is to be seen, and south of that region vegetation is only found along the banks of the rivers, the centre, and particularly the south of Chili, is rich in magnificent trees, beautiful shrubs, and medicinal plants.

Without entering into details of the botany and flora of the country, I may here mention some of the trees I had the opportunity of admiring in the primitive forests of the South.

First the "Roble," or oak (*Fagus obliqua*), a splendid tree, growing to the height of 150 feet, with a hard, durable wood, used for constructing houses. The "Coihue" (*Fagus Dombeyi*), a tree very similar to the Roble, but with a more luxuriant foliage. Then the "Lingue" (*Persea lingue*), a tree which grows to a height of 60 feet, the bark of which is now largely employed for tanning leather. It takes 2½ cwts. of dry Lingue bark to tan an ordinary sized ox-hide. The "Laurel" (*Laurelia aromatica*), a fine tree, which attains the height of 100 feet, with branches in proportion, covered with brilliant and odoriferous leaves.

The "Pino" (*Araucaria imbricata*), which only grows on the summit of the Cordillera de la Nehuelbata, and carries its branches and dark leaves to a height of over 100 feet. Then the "Litre" (*Litrea venenosa*), a thick-set tree, of which the wood, when dry, gets as hard almost as iron, and, in fact, is used to make axle-trees for carts. The "Canelo," which is so valued and revered by the Indians, and is in appearance like an orange-tree, growing to a height of about 30 feet in favoured localities. Fruit trees of every kind also grow to perfection. The apple-tree is found wild, and the vine, apricot, peach, and others introduced by the Spaniards, are now found in abundance, and quite acclimatized. Chili is the home of the potato, which, it is said, was introduced thence to England by Sir John Hawkins in the year 1565. The bean is also indigenous, and is still largely grown.

All the animals introduced by the Spaniards have also become acclimatized. The horse especially has multiplied on the soil, and all kinds of cattle are easily and successfully bred. Few animals are indigenous, as Chili does not boast of many quadrupeds. The principal are the Guanaco, the Huemel, a kind of small dromedary, and the Pudu, a species of deer. There is also the Puna or Chilian lion, an animal more like a tiger than lion, very destructive to cattle, but so timid that he never attacks man, and the little silver fox peculiar to the South.

The only venomous creature in Chili is a small spider. It is not found in the South, but is common in the North, and its bite is very dangerous. The spiders found in the South are of enormous size, some quite as large as an ordinary hand, but their bite is not poisonous.

This imperfect list cannot be closed without mentioning the Condor, that giant bird of the Andes. It is seldom these birds are seen except in their rocky home, but at times they pounce down on animals grazing in the plains. They are immensely powerful, and capable of carrying off a calf, which they do occasionally.

The great difference of rainfall over the length of the country naturally subdivides the land into zones, having each its special animal and agricultural produce. In the North, or rainless region, there is in reality no vegetation, and no animal life. This great desert district is rich, however, in minerals, and may be described as the mining zone, extending from parallel 24° to parallel 33° south.

The central region, with its moderate rainfall and equable climate, is the agricultural zone, embracing the district between parallels 33° and 42° south. Here almost any vegetable produce will grow to perfection. It is the grain and vine-bearing region — products which form, perhaps, the greatest wealth of the country, and to which probably tobacco will soon be added.

The grain trade has already been alluded to. The wine trade is every year becoming more important, especially since 1870, when the French vine was introduced, and excellent clarets and Burgundies produced.

The third zone lies south of the 42° parallel, and extends to the 56th. It embraces the Archipelago of islands which form the southern extremity of South America, and through which the Straits of Magellan form a communication between the two great oceans. These islands are well wooded, and are no doubt adapted to some kind of cultivation. At present they are uninhabited, save by a few aborigines, who live principally on fish, of which there is a great abundance in these regions.

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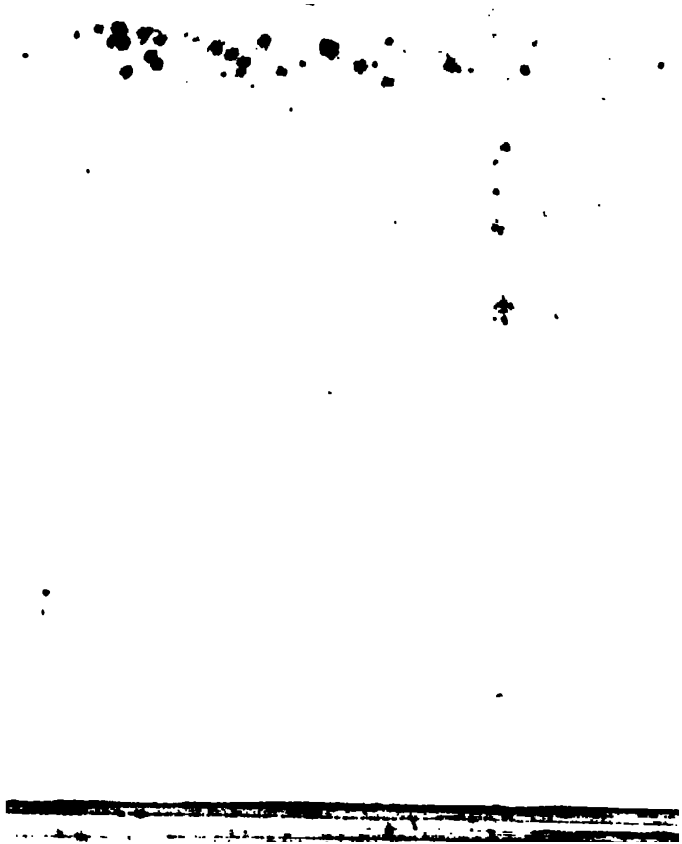

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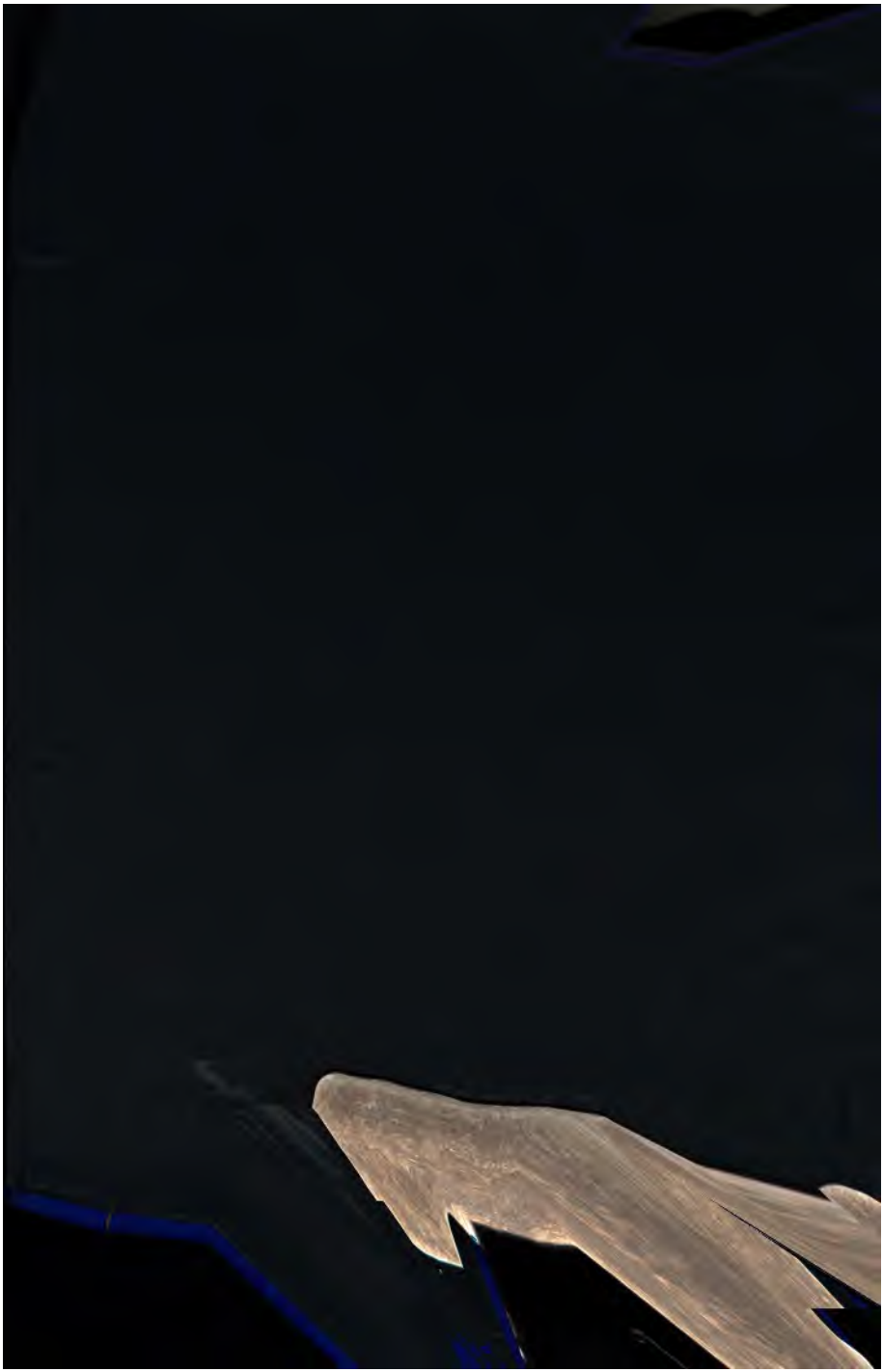
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